

The



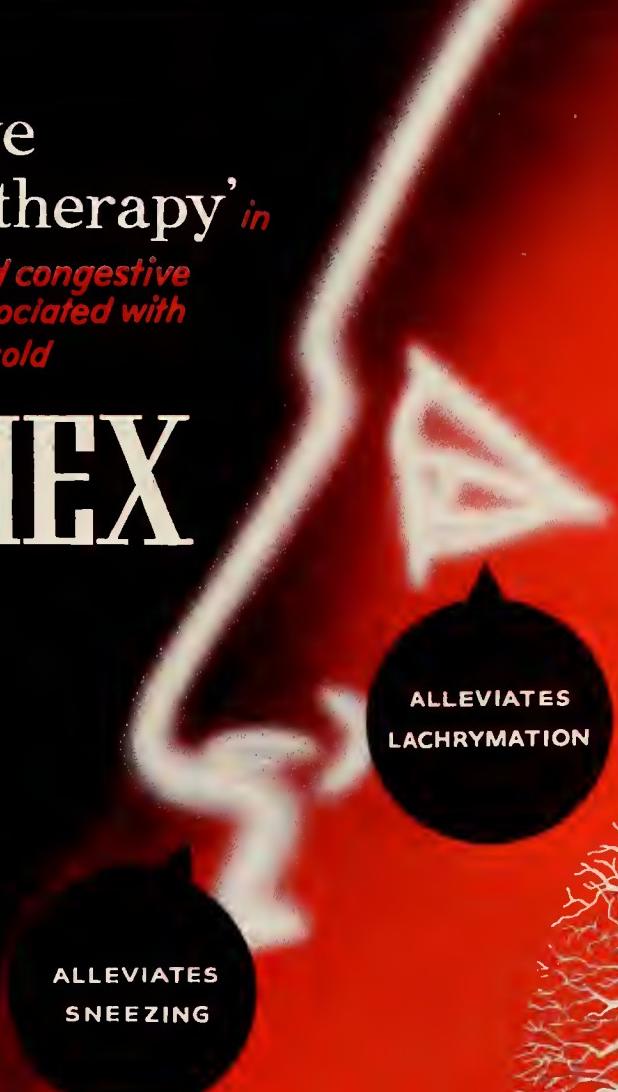
# CHEMIST AND DRUGGIST

For Retailer, Wholesaler and Manufacturer

FEBRUARY 7 1959

Effective  
'cough therapy' *in*  
*bronchitis and congestive  
symptoms associated with  
the common cold*

# PIRIEX



ALLEViates  
SNEEZING

ALLEViates  
LACHRYMATION



ALLEViates  
CONGESTION

Each 5 ml. spoonful of PIRIEX contains  
PIRITON (CHLORPHENIRAMINE) MALEATE 2 mg.  
AMMONIUM CHLORIDE B.P. 100 mg.  
SODIUM CITRATE B.P. 44 mg  
PRESENTATION — Supplied in bottles  
of 4 fluid ounces and 2 litres

ELLEN & HANBURY'S LTD LONDON

*QUALITY*

IN WHITE FLINT  
GLASS CONTAINERS



*First Class  
in GLASS*

- *Prompt delivery from stock*
- *Packed in easily handled cartons*

NATIONAL GLASS  
WORKS (YORK) LTD.

FISHERGATE, YORK. Tel. YORK 23021  
ALSO AT: 105 HATTON GARDEN, LONDON, E.C.1.  
Tel. HOLBORN 2146

TRADE  MARK

WHOLESALE ONLY

**DISPENSING BOTTLES**

1-oz. to 20-oz.

**RIBBED OVALS**

1 $\frac{1}{2}$ -oz. to 16-oz.

**PLAIN OVALS**

4-oz., 8-oz. and 16-oz.

**BOW-FRONT PANELS**

1-oz. to 8-oz. and 16-oz.

**OLIVE OIL BOTTLES**

2 $\frac{1}{2}$ -oz., 5-oz. and 10-oz.

**oval TABLET BOTTLES**

Nos. 1 to 7 $\frac{1}{2}$  sizes.

**ROUND SCREW JARS**

Tall and Semi-squat.

**PANEL FLATS**

1 oz. to 4-oz.

**VIALS**

1 $\frac{1}{2}$ -oz. to 3-oz.

**RECTANGULAR TABLET BOTTLES**

Nos. 1, 2, 3, 4, 5 and 6 sizes.

★ **AMBER BOTTLES.** We can now offer certain types of glass containers in Amber and your enquiries are invited.

HIGHEST TOLERATION  
PRACTICAL  
DOSAGE COMBINATIONS  
SATISFACTORY  
CLINICAL RESPONSE

*Physicians therefore specify*

# Calcium B-PAS WANDER

*and*

# B-Pasinah WANDER

(calcium B-PAS Wander plus isoniazid)

*in the domiciliary  
Chemotherapy of Tuberculosis*

**B-PAS (Wander)**, 4-benzoylamino-2-hydroxybenzoic acid, first introduced by our Research Laboratories in 1948, is the drug of choice in regimens comprising PAS in concurrent therapy.

In the form of its calcium salt, it induces only minimal side-effects as compared with sodium PAS, and because of its high acceptability guarantees as far as possible that domiciliary patients take their medication.

### CALCIUM B-PAS (Wander)

Powders: Tins of 150 and 400 x 3.5g. envelopes  
Cachets: " 80 and 400 x 1.0g.  
Also available: Sodium B-PAS (Wander)  
in 1.5g. Cachets.



### 'B-PASINAH' (B-PAS plus Isoniazid)

Powders:	Calcium B-PAS (Wander) 3.5g.
Isoniazid	.. .. .. 87.5mg.
	Tins of 150 and 400
Cachets:	Calcium B-PAS (Wander) 1g.
Isoniazid	.. .. .. 25mg.
	Tins of 100 and 500

Price details of all forms of PAS from the Medical Dept.

*All Wander tuberculostatic products are available from usual wholesalers or direct from*

**A. WANDER LIMITED, 42 UPPER GROSVENOR ST., GROSVENOR SQ., LONDON W.1**

T56

A



**PRESCRIBED**

**SUPPLY**

Two-way stretch elastic yarn stockings.

**Scholl**

**"SOFT-GRIP"**  
**and "SUPERLASTIK"**

Ensure that the finest stockings leave your Pharmacy.

Two-way stretch elastic yarn stockings are most frequently prescribed for the more common conditions of varices and oedema. In such cases, either Scholl Soft-Grip or Superlastik will ideally fulfil all requirements of the National Health Service.

**SCHOLL "SOFT-GRIP"**  
Thigh Stockings

Exclusive and outstanding features:—

Feather-light ribbed nylon 'Soft-Grip' top and finish give longer life and added comfort. Support is continued right to the upper thigh and 'ridging' avoided inside the shoe.

The unique fabric and production technique moulds them firmly to the contours of the leg, giving uniform pressure without wrinkling and creasing. Their seamless construction also makes them near-invisible under dress hose.

A fashioned instep eliminates creasing, improves fit and wearing quality in this area. Nylon reinforcement of the heel gives greater comfort and longer life.

They are light and cool in wear.

**SCHOLL "SUPERLASTIK"**  
Below-Knee Stockings, Anklets and Knee Caps.

In addition to the above advantages, these are knitted with a unique stitch formation which causes the stocking to cling to the leg and eliminates the annoyance of slipping down. Particularly suitable for male patients.

**THE SCHOLL MFG. CO. LTD.,**

182-204 ST. JOHN STREET, LONDON, E.C.1.

**SCHOLL**

Foremost in Surgical Hosiery Manufacture.

Scholl are acknowledged throughout the world as a leading authority on surgical hosiery. This leadership is maintained by unrivalled resources, research and experience. Enquiries or comments from Pharmacists concerning Scholl surgical hosiery are always warmly welcomed.

# I.C.I. Aerosol Insect Spray

# BIG CUTS IN PRICES - PLUS BONUS OFFER!

## PRICE CUTS

5 oz.	reduced from	<b>5/6d.</b>	to	<b>4/6d.</b>	retail
12 oz.	"	<b>10/6d.</b>	to	<b>9/-</b>	"
20 oz.	"	<b>17/6d.</b>	to	<b>15/-</b>	"

## BONUS OFFER

5% extra discount on these trade prices for all orders received before April 30th:

5 oz.	<b>37/10d.</b>	trade doz. (minimum 1 doz.)
12 oz.	<b>75/7d.</b>	trade doz. (minimum $\frac{1}{2}$ doz.)
20 oz.	<b>126/-</b>	trade doz. (any quantity)

Note minimum quantities on 5 oz. and 12 oz. packs to qualify for Bonus Terms.

Please discuss credit for existing stocks with our representative when he calls.

Three powerful insecticides combine to make I.C.I. Aerosol Insect Spray outstandingly effective. First, gamma BHC; second, pyrethrin; third, piperonyl butoxide. Together they form an insect spray that is both quick-acting and persistent—lethal to flying insect pests of all kinds, yet harmless to human beings and animals.



Leading women's magazines will carry advertisements for I.C.I. Aerosol Insect Spray in summer issues. Counter leaflets, showcards and crowners are available for your own display.

IMPERIAL CHEMICAL INDUSTRIES LIMITED      Pharmaceuticals Division      Wilmslow      Cheshire  
Ph.905



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**This  
is the Pack for  
YOUR dispensary**

**BISMUTH SUBGALLATE  
SUPPOSITORIES  
COMPOUND B.P.C.  
MANUFACTURED BY  
RICHARD DANIEL & SON LTD DERBY**

**Supplies obtainable  
from your usual  
Wholesaler**

**Manufactured and packed  
in the Laboratories of**

*Sample box gladly sent upon request from*

**RICHARD DANIEL & SON, LTD.**

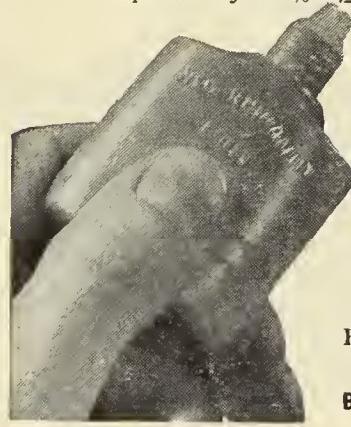
Mansfield Rd., Derby. Tel. 40671 (10 lines) and at  
Grosvenor St., Ashton-u-Lyne. Tel. 5161 (9 lines)

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**A plastic nebuliser effective against antibiotic resistant bacteria**  
(contains no sulphonamide)

Formula : Liq. Benzalkonium Chloride 0.04% Ephedrine Hyd. 1.0%



## NEO-RHINAMID BAILLY

### INDICATIONS

Acute Rhinitis  
Chronic Rhinitis  
Catarrhal infections with deflected septum  
Small septal ulcers  
Pharyngitis

### PACKING

Plastic nebuliser containing 15 c.c. solution

Trade price inc. P.T.

2/2 each

Retail price inc. P.T.

3/3 each

BAILLY LTD., LONDON

Made and distributed by

When a cough sedative, expectorant and respiratory tonic is required . . .



## PULMO BAILLY

is the answer

90 c.c. BOTTLE :

Your price 34/- per doz.

plus 9/11½ P.T.

Retailing at 4/8 each

DISPENSING PACKS :

16 fl. ozs. 11/6 net

80 fl. ozs. 45/- net

BAILLY LTD., LONDON

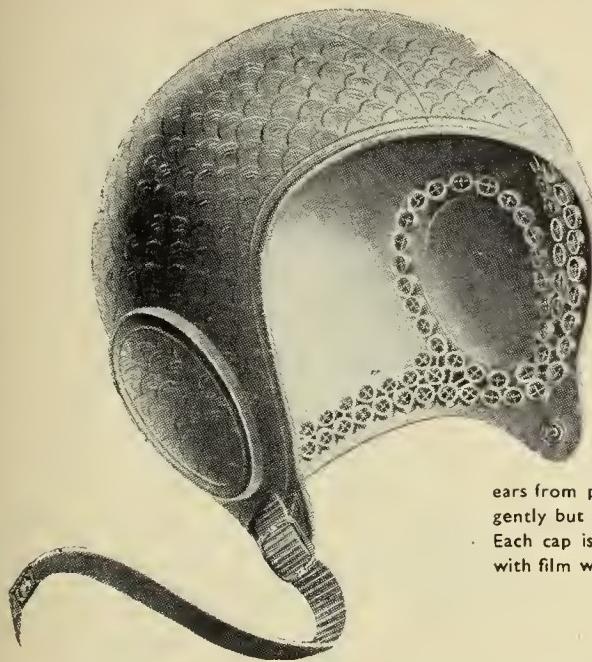
Made and distributed by



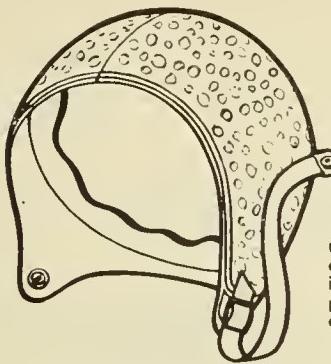
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Manufacturing Chemists

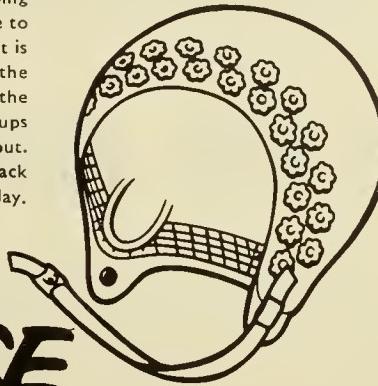
MOUNT PLEASANT • WEMBLEY • MIDDLESEX

**TRIDENT**

The Trident is attractive yet businesslike—doing the job it was made to do without fuss. It is really comfortable, the ear pieces protecting the ears from pressure and the suction cups gently but firmly keeping the water out. Each cap is in an individual display pack with film window, packed 12 to a display.

**6/6d Retail****SEAL**

The inner flange forms an air pocket, keeping the hair completely dry. Each cap in individual sleeve, packed 12 to a display box.

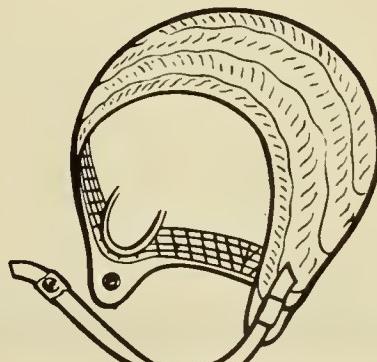
**4/9d Retail****PENGUIN FLORAL**

A thin, stretchy, watertight cap with fashionable floral decorations at a popular price. Each cap in polythene bag.

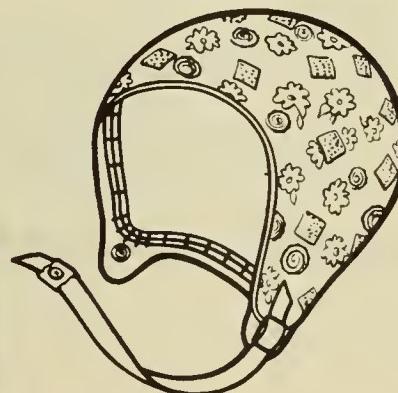
**7/9d Retail**

# **FOR 1959 CHOOSE FROM THE RANGE OF 'SUBMARINE' SWIMMING CAPS**

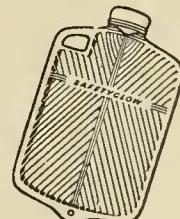
Again heavily advertised in the National Press. The Submarine range of swimming caps is comprehensive. The prices and styles meet all needs, the quality is consistent and the rubber used is high grade and compounded to give maximum elasticity with long life. All caps are thin, making them easy to put on, light weight and comfortable. The brand name "SUBMARINE" is your guarantee of quality, backed by first-class service.

**2/11d — 7/9d****PENGUIN**

A most popular and efficient swimming cap. Each cap in a polythene bag. Twelve to a display carton. The strapless model will be much in demand.

**3/6d Retail****STANDARD  
AND  
CLIPPER**

Now fitted with water-excluding ridges. Packed twelve caps to a box.

**2/11d Retail****SUBMARINE HOT WATER BOTTLES**

A complete range at competitive prices—with metal or rubber stoppers. Every bottle fully guaranteed.



W. W. HAFFENDEN LIMITED • RICHBOROUGH RUBBER WORKS • SANDWICH • KENT

Telephone: Sandwich 3381/2

# They're rushing to stop coughing!

And they won't stop rushing till they've experienced the consolation of smooth and dependable relief—as provided by 'Pectamol' Linctus and 'Tussimol' Cough Pastilles. Each contains oxeladin, an entirely new type of cough suppressant acting directly on the medullary centre.



## 'TUSSIMOL' TRADE MARK COUGH PASTILLES

The pleasantly flavoured pastilles that deal effectively with the dry 'tickling' cough.  
TRADE: per dozen tins 23/9.  
RETAIL: 2/8 each—exempt P.T.  
*Special winter bonus terms for direct orders.*

For specific cough suppression with local demulcent effect.

TRADE RETAIL

60 ml.....	2/6 .....	3/9
250 ml.....	8/9 .....	
2 litres .....	56/1 .....	

## 'PECTAMOL' TRADE MARK LINCTUS

THE BRITISH DRUG HOUSES LTD. LONDON N.1

BDH

# FIGGERROLLS

will help to increase your sales of  
**STARCH-REDUCED ROLLS**

• • • • • • • • • • • • • • • • • • •

## A NEW FLAVOUR FOR DIABETICS AND SLIMMERS

Diabetics and slimmers alike will welcome the appetising whole wheat flavour of starch-reduced Figgerrolls—crisp and delicious, they are a delicious break in the monotony of an ordinary low starch diet. Figgerrolls are made with nutritionally valuable fresh wheat gluten, and they are enriched with specially processed wheat germ and the most nutritious parts of the bran. In the manufacture of Figgerrolls every care is taken to ensure that each roll contains the stated amount of protein.



### ANALYSIS

For diatetic or medical purposes

	Gm./oz.
Protein (N X 5.7) .....	11.5
Carbohydrates .....	11.7
Fat .....	1.4
Salt .....	0.6

Calories 107 per oz.  
Four Figgerrolls  
weigh approx. 1 oz.

### TRADE TERMS

12 x 30 roll packs 24/- per case  
24 x 10 roll packs 23/- per case  
Order from your usual wholesaler

## WHITWORTH'S STARCH-REDUCED **FIGGERROLLS**

WHITWORTHS HOLDINGS LIMITED · WELLINGBOROUGH · NORTHANTS

# Introducing max

## Look at the Packs

Specially designed to appeal strongly to women. Gay, arresting, with unbreakable tops in matching colours. Eye catching, easily recognised and remembered.

## Look at the Facts

The Max range is made to exacting and advanced formulae — brilliantly efficient, technically supreme, safe and simple for women to use.

**FLY KILLER** Contains the most advanced agent known for the rapid destruction of flies, wasps, mosquitoes and other flying insects. Safe, non-inflammable, does not stain, delicately perfumed.

**MOTH PROOFER** Will kill moths, grubs and larvae, woolly bears and carpet beetles. Delicately perfumed, does not stain and can be used direct for treating clothing, upholstery and curtains.

**AIR FRESHENER** Fragrant and a pleasure to use, the Max Air Freshener contains antiseptic and germicidal agents to destroy airborne bacteria and remove unpleasant odours.

\*

**Stock up with max**

These three Max products are the forerunners of the biggest range of Aerosols ever planned. More and more new items will be introduced and made available, items covering a very wide field. Be sure you are in on it from the start.



## SOON EVERYONE WILL KEEP

# the *New* aerosol range

*on T.V. every night  
for 14 weeks  
from 4<sup>TH</sup> OF MAY*

**PLUS** THE RADIO TIMES  
EVERY WEEK FOR 13 WEEKS

**PLUS** THE T.V. TIMES  
EVERY WEEK FOR 11 WEEKS

**PLUS**  
 'IDEAL HOME',  
 'HOMES AND GARDENS',  
 'HOUSEWIFE' AND  
 'GOOD HOUSEKEEPING'  
CONTINUOUSLY FOR FOUR MONTHS  
STARTING MAY.

TRADE PRICE 40/6d PER DOZ.

**PLUS** INTRODUCTORY BONUS  
OFFER UP TO APRIL 30th

**2½%** Extra discount on orders of  
1½ dozen ( $\frac{1}{2}$  dozen of each)

**5%** Extra discount on orders of  
3 dozen (1 dozen of each)

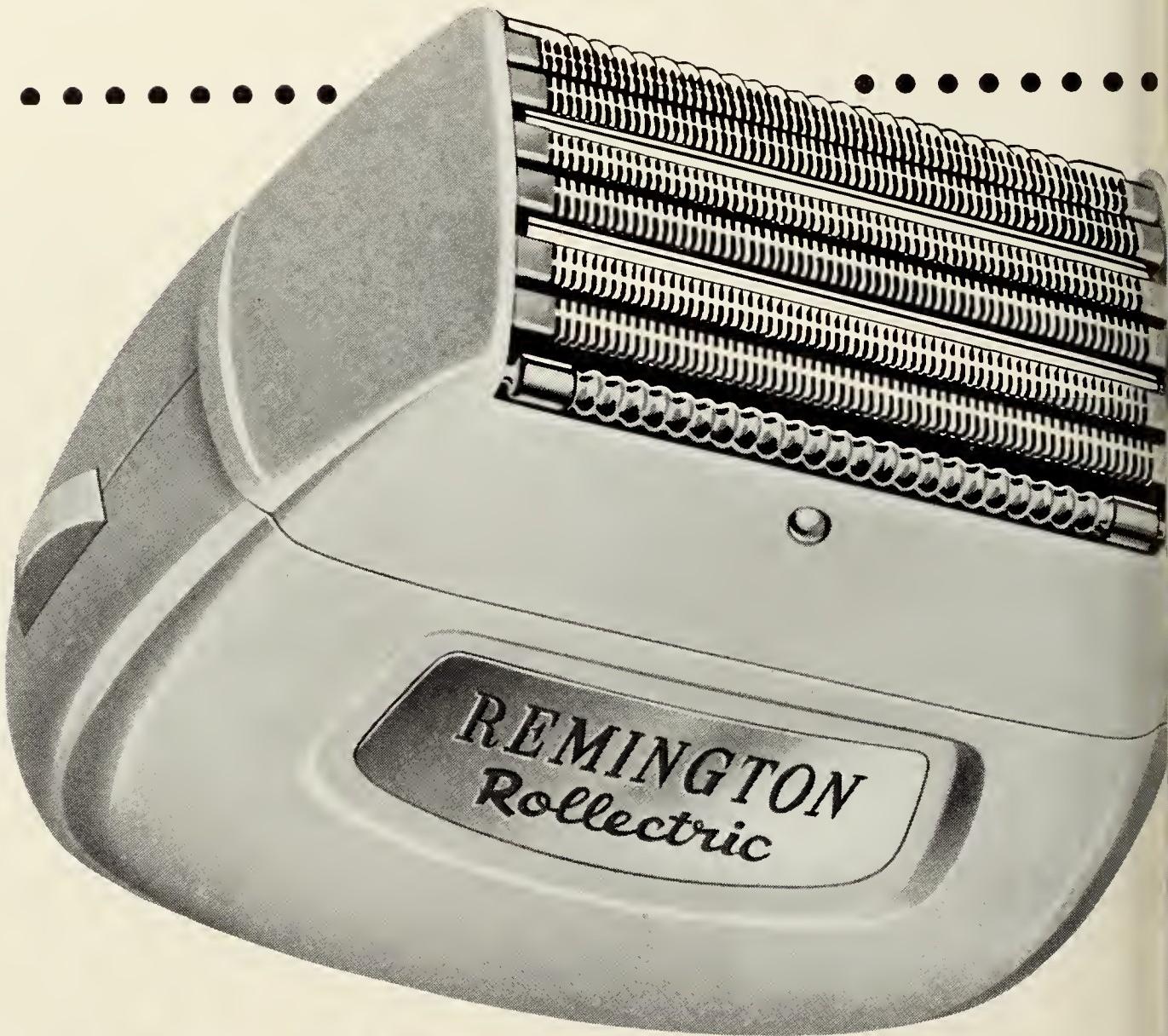
**7½%** Extra discount on orders  
of 6 dozen (your choice)

RETAIL PRICE 4/6d EACH

\* You can order **max** from your usual wholesaler  
MONDART LIMITED, 49 PARK LANE, LONDON, W.1

A **max ABOUT THE HOUSE**

# Announcing the REMINGTON



## BIGGEST SHAVING NEWS OF 1959!

# ROLLECTRIC

NOW!!! 3 TWIN  
SHAVING HEADS!

**NEW SPEED!** 50% more actual shaving area

**NEW CLOSENESS!** Special contour design

**NEW COMFORT!** Exclusive Remington Roller-Combs

This new man-sized shaver removes more beard at one stroke than any other shaver. The Rollectric retains all the best-selling Remington features, including exclusive Roller-Combs. But now there is more of everything! More heads, more combs, more power. More sales and more profit—£2 9s. 9d. on every standard Rollectric selling at £10 19s. 5d.

**Send a bonus offer!** By post you will receive details of the Remington introductory Bonus Offer, and the new price structure of the full Remington range. (If you have not received your copy of this mailing, please write to Mr. R. Remington Rand Ltd., Shaver Division, 26-40 Kensington High Street, London, W.8.)

**The Day**—the day when the Rollectric will be launched to the public—is March 31st. Details of the heavy advertising and merchandising backing will be announced.



SEND YOUR ORDER THROUGH  
YOUR REGULAR SUPPLIER  
—and send it NOW.

# You must profit from

## FORMULA

*The modern aid to natural slimness*

**21**

- \* **A sound, tested product**
- \* **Honestly presented to your customers**
- \* **BACKED BY TREMENDOUS ADVERTISING**

### FORMULA 21

is the new slimming aid hundreds of thousands of women have been waiting for. Here, at last, is the slimming aid *you can safely recommend*. Based on the researches of a leading nutritionist, Formula 21, a unique preparation of methyl cellulose, controls appetite harmlessly. Taken with a low carbohydrate menu, Formula 21 aids regular loss of weight, without drugs, exercises or hunger pangs. Formula 21 helps men and women to adopt new eating habits — without strain or undue effort.

Now, after outstanding success in the test market, Formula 21 is released for retail sale through all qualified chemists. Your customers will like Formula 21 and will come back for more. The test market has proved both acceptability and repeat sales. *Stock up now!*

#### PROVED by direct sales

Test marketing last year sold scores of thousands of tins — a staggering success !

#### PROVED by medical tests

Overweight men and women lost an average of 20 lb. in tests under strict medical supervision by one of Britain's leading nutritionists.

#### ACCEPTED by independent authorities

A famous independent research organisation accepts Formula 21 as "safe and effective".

*Family Doctor* magazine says "probably the most honest and sensible proprietary slimming preparation on the market".

## YOUR MASSIVE MARKET

**Every overweight adult in Britain  
is a potential customer for**

**FORMULA 21**

*Remember*

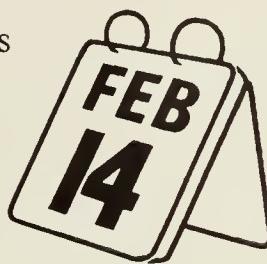
**1 ADULT IN 3**

**is overweight by 10 lb. or more**

# MASSIVE LAUNCHING MEANS SWIFT SALES!

**FEB. 14th** — Full page in **WOMAN** — Britain's biggest-selling Women's magazine begins **ENORMOUS NATIONAL PRESS CAMPAIGN**.

Outstanding spaces in **EVERY LEADING WOMAN'S MAGAZINE** and **LEADING NATIONAL AND SUNDAY PAPERS**.



**BY FAR THE BIGGEST EVER T.V. CAMPAIGN IN THIS FIELD.**

Nation-wide coverage from **EVERY STATION IN EVERY REGION!**

Full 60-second spots at peak time reach 11,500,000 viewers.

**PLUS** live television selling—in popular magazine programmes.

## YOU MAKE 5/3 PROFIT ON EVERY TIN!

**1/- TIN • 21 DAYS SUPPLY**



### *You can be sure of repeat sales*

Each tin is packed in an attractive display carton. 24-page booklet, with helpful diet suggestions enclosed with every tin. Display 'crowners', showcards and planatory leaflets are available on demand.

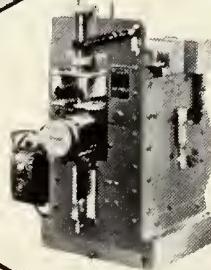
***Order from your wholesaler now***

**FORMULA**  
**21**

*It must be  
NEWMAN for  
labelling & packaging  
equipment*

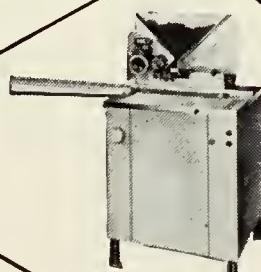
**LABELLING  
MACHINES,**  
Bench Model,  
Serial Automatic

Gum and apply labels  
to small and medium  
bottles, packs etc.  
Quick change-over.  
Strip Gumming Model 23A  
Fully Gumming Model 3C



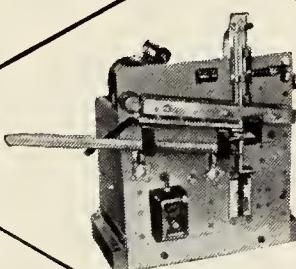
**VIAL & AMPOULE  
PRINTING MACHINE**

High quality  
printing. Double  
impression  
offset system  
using quick drying  
or ceramic inks.  
Variable speed control.  
Quick change-over  
Model IF



**LABELLING MACHINE**  
Bench Model, Automatic

For ampoules, vials,  
crayons, tubes,  
torch cells etc.  
Label coding  
available.  
High quality  
labelling due to  
sustained pressure on label  
after application.  
Model 2B.



See our display at the  
**PACKAGING CENTRE**  
50 Poland Street, London, W.I  
Open weekdays from 10-6

**LABEL GUMMING MACHINE**

Self feeds labels from simple  
magazine. Motorized. Touch-bar  
control. High speed operation.  
Model ID.



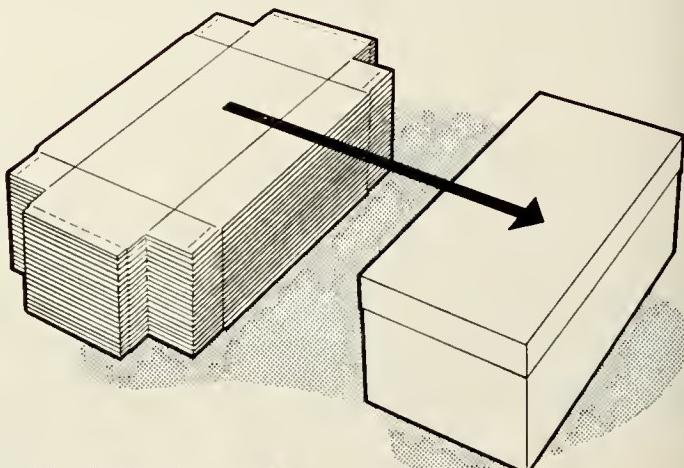
**D. TRAPOW & CO. LTD.**

ENGINEERS

113-115A REGENTS PARK ROAD, LONDON, N.W.1

Telephone: PRImrose 6688

**Store 20 boxes  
flat in the  
space of 1**



**Flat folding for storage**

Self-sealing boxes are assembled only when needed. In storage they remain flat; in this way, twenty or so boxes can be stored in the space normally taken by one ordinary box.

**Easy assembly**

Boxes have flaps with adhesive ready-applied, but no loose ends or flaps to be tucked in. Quick pressure will seal the flaps instantly, and the box is made!

**Rigid and decorative**

Davidsons self-sealing boxes are made from stout boards that withstand the roughest treatment when assembled. The firm, non-bulging sides lend themselves to decorative finishes; for further point-of-sale appeal, your name and trade mark can be overprinted, in colour if necessary.

For competitive costs, samples, and further details, write today.

• • •  
Quicker still, if you have large quantities to deal with . . . use the Davidson assembling machine. Shapes up, ready for filling, 1,000-1,500 blanks per hour according to the operator. Machine measures 36 x 36 x 48 ins. high, weighs 5 cwt. Works by compressed air. Further details promptly on request.

**SELF-  
DAVIDSONS  
SEALING  
BOXES**

C. Davidson and Sons (Packaging) Ltd. Southern Division  
Corinthian Manor Way, Erith, Kent.



## manufacturing

# packaging



The COX organisation offers a complete manufacturing and packaging service for the retailer, wholesaler and those marketing proprietary brands.

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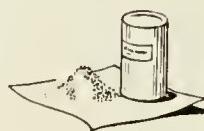
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**POWDERS**



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**OINTMENTS**



assist you to achieve this object and increase your sales this year and every year.

You're in safe hands when



do the job

**PHARMACAL SUPPLIES LTD.**

Pharmaceutical Manufacturers

GREEN LANE, HOUNSLOW, Middlesex

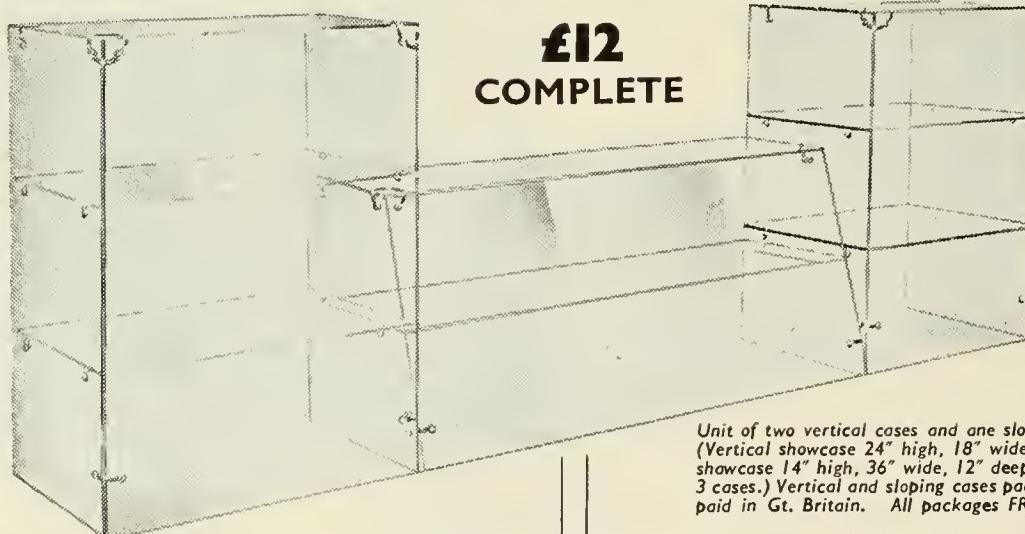
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COMPLETE**



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Address .....

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Here's your chance to increase your Ronson shaver sales to a new high ! Ronson's five-point campaign helps you—and attracts new customers for you.

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—stock up now, and be ready to double your sales !**

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NEW FROM PEARS

# First Baby



You yourself well know the remarkable properties of Roccal. Now it's in Pears Baby Powder. New Pears is just as safe, gentle, fragrant and soothing as other baby powders, but thanks to Roccal, it has *far* greater protective and prophylactic powers. It is effective against a wide range of skin organisms and, in particular it destroys the bacteria that cause Ammonia Dermatitis. It's a extremely effective body deodorant too.

**2/-** Retail

\* Active ingredient: 0.2% Benzalkonium Chloride.

### This is how we're backing New Pears Baby Powder

- \* Impressive double page and whole page ads. in a the most widely read mother-and-baby magazine.
- \* Special advertising to nurses and midwives.
- \* Attractive display material for your shop.

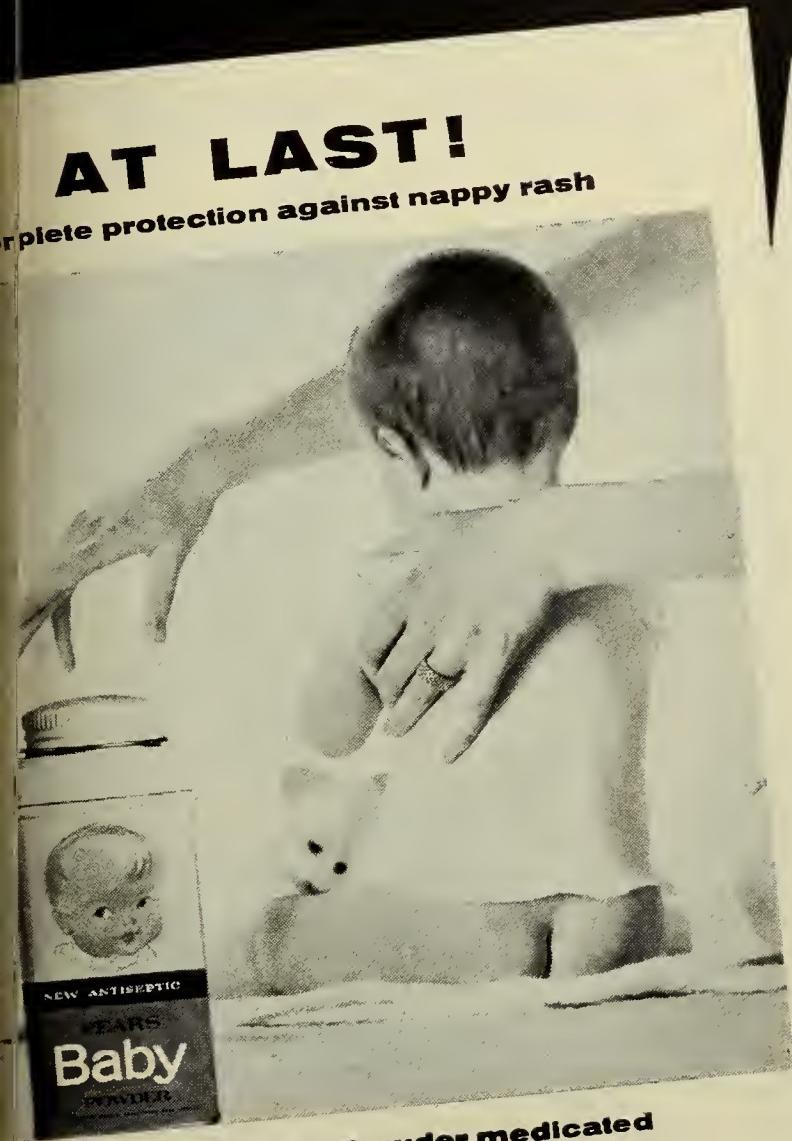
### May we count on your support?

Your advice as a chemist counts for a very great deal, and by recommending this remarkable new powder to your customers, you will be rendering them a service.

\*Pears are regd. users of Trade Mark Roc-

**stock PEARS**

# Powder with Roccal\*



**AT LAST!**

complete protection against nappy rash

Important news for midwives and mothers

A Baby Powder  
with far greater protective and  
prophylactic powers

ars New Antiseptic Baby Powder is  
first in Britain to be medicated with  
cal\*, the well-known hospital anti-

e of Roccal gives Pears protective and prophylactic powers far greater than any other baby powder. New Pears powder is effective against a wide range of skin organisms and, in particular, it destroys those which cause Ammonia Dermatitis. This potent form of nappy rash can be completely relieved by dusting nappies thoroughly with the powder. And, to add to its remarkable properties, as an extremely effective body deodorant, Pears is such a powerful prophylactic it is non-toxic, and has all the gentleness, freshness of ordinary baby powder.

I recommend this remarkable new powder to mothers with absolute confidence. It gives so much protection to their babies.

\*Active Ingredient: 0.2% Benzalkonium Chloride

Pears are regd. users of Trade Mark Roccal

Mothers know about Pears Antiseptic Baby Powder



**Pears New Baby Powder medicated  
with hospital antiseptic Roccal\***

Remarkable New Pears Baby Powder is as gentle, and soothing as the powder you're now using, but gives far greater protection to your skin. Use it is medicated with a special hospital antiseptic, New Pears kills harmful skin bacteria and skin troubles starting. Above all, it destroys

ammonia-forming bacteria and so removes the most frequent cause of nappy rash. And New Pears is a deodorant too.

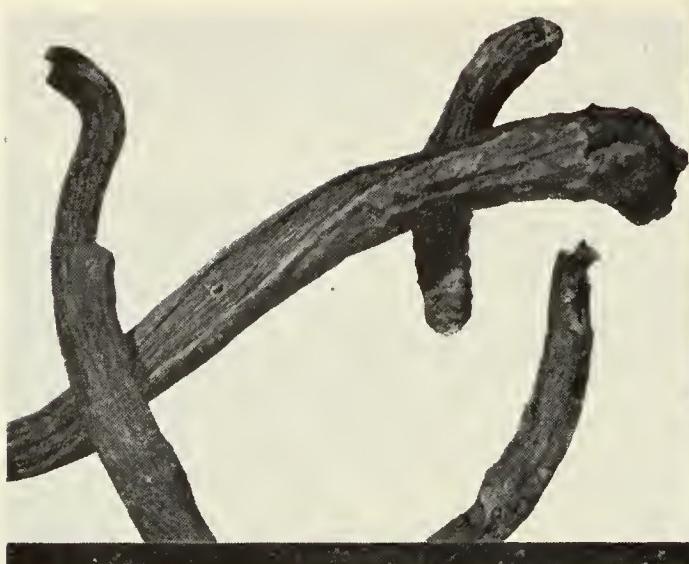
Now you know about this remarkable new baby powder, how can you be satisfied with anything less for your child?

\*Active Ingredient: 0.2% Benzalkonium Chloride

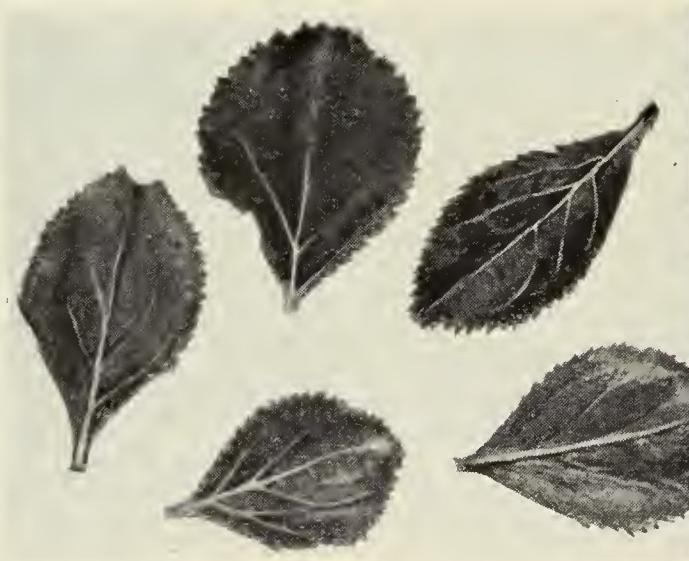
REGD. USERS OF TRADE MARK ROCCAL

# Baby POWDER

PBP/3/7258/100



Do you buy your own raw materials—roots, barks, leaves, seeds, etc.? If so, you can get Ransom's quality into your finished products. Ransoms are specialists in processing for the trade; they have over 100 years of experience in processing their own vegetable drugs—a guarantee that your own materials receive the same meticulous care that has made the name Ransom famous throughout the world for quality.



Established 1846

## **WILLIAM RANSOM & SON LTD**



HITCHIN  
HERTFORDSHIRE

*Manufacturing Chemists and Medicinal Plant Growers for over a Century*

**Get Ransom's  
quality  
into your own  
processed materials**



Ransoms also offer a complete manufacturing service—from raw material to final packing—for customers' own proprietary products. Give your products the benefit of Ransom's processing. Trade enquiries invited—all treated in strictest confidence.

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Denhams' factories have unmatched experience in repair and overhaul for the trade of ELECTRIC BLANKETS & PADS of all makes, British & Foreign.

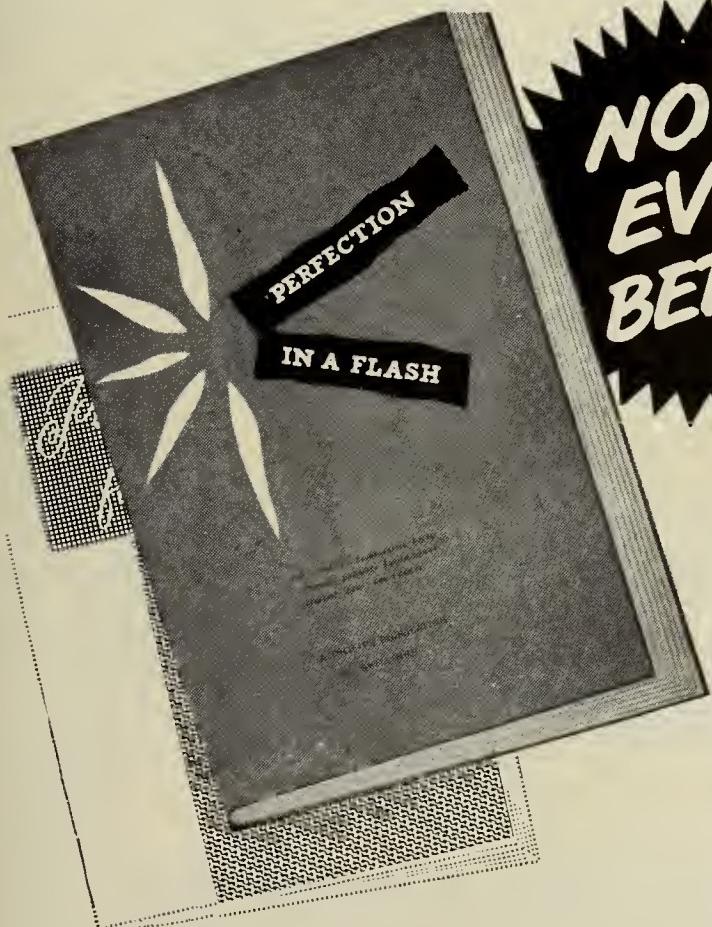
LARGEST AND LONGEST ESTABLISHED  
RAPID 5 DAYS' SERVICE

Nationally known for thoroughly reliable and inexpensive repairs. Free estimates on request.

Service Department:—

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## 'PERFECTION IN A FLASH'

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### MORE POPULAR THAN EVER—FOR MANY REASONS:

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- Comprehensive index.
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- Supplied in 1 doz. lots in attractive display containers.
- Retail Price only 4s. per copy.

Order now to meet demands for this widely advertised book.



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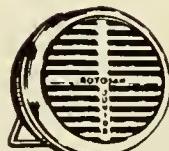
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ROTosan the products with an all-year-through appeal to housewives . . . ROTOfresh the modern toilet fitting which made "sales history" last year . . . take advantage of this NEW splendid bonus offer, make up YOUR order from the full ROTOSan range . . . fine products with a big future for YOU!

BIGGER-THAN-EVER POTENT ADVERTISING . . . will appear in the leading National Newspapers and in the Women's Magazine Press, directed to the housewife. ROTOSan will be in bigger-than-ever demand this year.

**ORDER FROM THE  
FULL ROTOSAN RANGE**

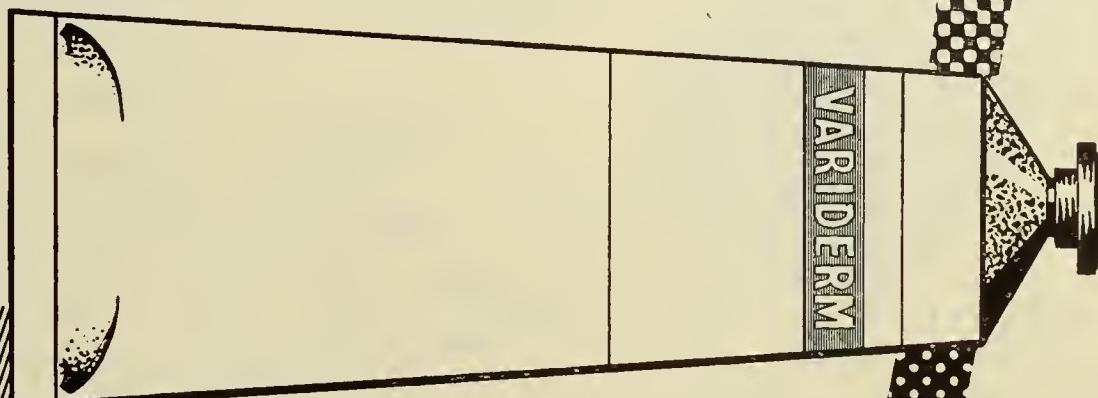
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Refills	1/3	10/-	—
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Juniors	2/6	18/6	1/3
Automatics	5/6	41/6	3/9
Crystals (Superfume Bags)	2/-	16/-	—
Channel Blocks (3 per pkt.)	1/6	12/-	—
ROTOcubes (Large)	1/3	10/-	—

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OF  
THESE**

Full particulars from CULLINGFORD OF CHELSEA, Cheyne Walk, London S.W.10

**A NEW APPROACH**

*in the treatment of  
Varicose Ulcers and  
Intractable Bedsores . . .*



Variderm contains a highly purified extract of bovine placenta and has been found of great value in the treatment of varicose ulcers and intractable bedsores which have not responded to antibiotics, steroids and other forms of treatment.

**Variderm****OINTMENT**

Prices: 100 G tubes

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# BIG PROFITS...

## from a small display



In sales value per square inch of your counter the 4" x 3" red, yellow and black RALGEX outer pays and pays again for prominence without encroachment. Ralgex is a first-class pick-up repeater line—established in the forefront of pain-relieving remedies and the only solid embrocation for

**BACKACHE · NEURALGIA · STIFF NECK · LUMBAGO  
RHEUMATISM · STRAINED MUSCLES**

*Display Nationally  
advertised 'RALGEX'  
-the only line of its kind*



Worth-while profit from every sale  
of the reach-it-yourself handy Ralgex  
stick.

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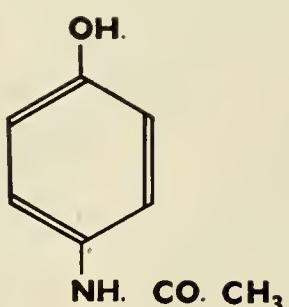
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*The non-salicylate analgesic*



*N-acetyl p. aminophenol*

**W. J. BUSH & CO. LTD.**

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*The*

Now available in  
**AMBER**  
2, 3, 4, 8 and 16 oz.

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PANEL**

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Available in sizes :—  
1, 2, 2½, 3, 4, 5, 6, 8, 10, 12  
and 16 oz.

Caps : Black, White or Red Plastic,  
White Enamelled Metal.

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GLASS BOTTLE MANUFACTURERS  
ROOTHERHAM      Established 1751      YORKS

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# THE CHEMIST AND DRUGGIST

ESTABLISHED 1859

The weekly newspaper for pharmacy and all sections of the drug, pharmaceutical and fine chemical, cosmetic, and allied industries

*Official organ of the Pharmaceutical Society of Ireland and the Pharmaceutical Society of Northern Ireland*

Volume 171

February 7, 1959

No. 4120

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*Ample Supplies are available NOW!*



Complies with the specifications set out in part IV of the N.H.S. Drug Tariff.

Complete with standard size bottle of Vaporizing Liquid and six night lights. Retail .. .. 7/11  
Vaporizing Liquid Refills. Retail .. 1/9 & 5/6  
Spare absorbent blocks. Retail .. 1/- each

The Vaporizing Liquid cannot spill if the apparatus is accidentally knocked over while in use.



Obtainable from all Wholesalers, or direct from  
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## Bonus terms

Two tubes free in every dozen purchased.  
Outlay 20/-, Selling Value 36/-  
= 80% profit on outlay.

## TRAFURIL cream

All orders packed in a striking display outer; showcards available on request; special terms for larger orders. Order through your usual wholesaler or the CIBA representative.



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CIBA LABORATORIES LIMITED, HORSHAM, SUSSEX



# The CHEMIST AND DRUGGIST

Volume 171

FEBRUARY 7, 1959

No. 4120

## More for the Health Service SAVINGS OFFSET BY HIGHER COSTS

NEARLY £19 millions more than was originally estimated is required to finance the National Health Service for 1958-59, making the total £549,678,636.

	ENGLAND	WALES	SCOTLAND
	£	£	£
Payments to pharmacists, ingredient cost and container allowance ... .. .	1,484,000	101,000	518,200
Allowance for overheads and profit .. .	374,000	25,000	137,800
Payments to doctors and dentists .. .	239,000	17,000	17,500*
	2,097,000	143,000	673,500
Less—Saving on Pharmacists—Dispensing and fees .. .	561,000	30,000	83,000
Add—Shortfall in payments by patients .. .	1,536,000	113,000	590,500
Totals .. .	2,057,000	144,000	641,000

\*Includes £500 for Health Centre Services

That figure includes an extra £2,800,000 to finance the pharmaceutical services, an increase made necessary because the "saving resulting from an expected reduction in the number of prescriptions . . . has been more than offset by higher average cost per prescription attributed largely to new drugs and preparations." The details of the additional pharmaceutical services requirements, given in the table above, are taken from the 1958-59 Supplementary Estimate, Civil Estimates (H.M. Stationery Office, price 8s.).

The publication of the estimates of the changed financial requirements followed quickly upon the report by Sir Edmund Compton (Comptroller and Auditor General) on the Civil Appropriation Accounts 1957-58 (H.M. Stationery Office, price 19s. 6d.). Sir Edmund reported that the total cost of prescriptions under the N.H.S. in 1957 rose to £68 millions, including £11·8 millions paid by patients for 228 million prescriptions. He next recorded an increase to 5s. 11½d. in the average cost of a prescription. He also referred to the increased prescribing of expensive new drugs, the prescribing of larger quantities at less frequent intervals and the growing tendency to prescribe proprietary preparations. One-half the prescriptions in 1957 were for proprietary medicines. The Appropriation Accounts show that in ENGLAND in 1957-58 the pharmaceutical services cost £49,546,824 (£675,175 less than the estimates). In WALES the pharmaceutical services cost £3,772,880 (£104,119 less than was anticipated). In SCOTLAND £6,327,066 was spent on pharmaceutical services (£87,066 more than the esti-

mated total, which included a supplementary estimate of £754,000). Fees imposed under the Dangerous Drugs Act, 1951, realised £9,612, which was £212 more than was anticipated.

### Polyoxyethylene Esters PHARMACOLOGICAL STUDIES

UNDER the title "Biological Effects of the Polyoxyethylene Esters," Professor A. C. Fraser (professor of pharmacology, Birmingham university) gave to the food section, Society of Chemical Industry, and the Royal Institute of Chemistry on January 21 an account of investigations carried out on those substances in his laboratory. The polyoxyethylene esters, he said, had emulsification properties that won for them a wide usage in the food industry. Chemically the esters were derived from

long-chain fatty acids and had the generic formula  $\text{HOCH}_2 \cdot \text{CH}_2 \text{N}(\text{CH}_2\text{OH})_n \text{CH}_2\text{OH}$ ,  $n$  representing 7-8 for polyoxyethylene stearate and 20-22 for polyoxyethylene sorbitan stearate (lauric acid esters were not used). As with all food additives there were specifications to ensure consistent standards and to ensure safety). The substances were used in bread, cakes and confectionery at an average daily intake estimated at 500 mgm., and biological investigation was directed to establishing the LD<sub>50</sub>; the effects caused by a single dose; and the results of repeated doses. The results on the whole were negative and that had prompted doubts about the value of the tests. In consequence overloading tests had been made, which—though he was not convinced of the rational nature of such tests—showed up variations in weight gain in the test animals. Such disturbances were not regarded as a toxic effect of the material. Final tests were concerned with carcinogenic effects and it was concluded that the esters had no carcinogenic properties.

### Trade Mission to Ghana

#### A PHARMACIST ON THE DELEGATION

A TRADE mission led by Sir George Binney is visiting Ghana from Britain in March upon the invitation of the Ghana Government. The member of the delegation representing industries interested in pharmaceuticals, chemicals and insecticides is Mr. Reginald G. Hoare, M.P.S. (a director of the pharmaceuticals division, Imperial Chemical Industries, Ltd.).

### Rating

#### PLANT AND MACHINERY REPORT

A NEW list of all types of machinery and plant which a committee on rating considers should be liable to local rates on the principles established by the Rating and Valuation Act, 1925, has been published. The list revises and brings up to date in the light of modern



CIVIC VISITOR: The lord mayor of Liverpool photographed while on a visit to the Speke factory of Evans Medical Supplies, Ltd. He is watching a girl sorting coated tablets. In the background is the chairman of the company (Mr. I. V. L. Fergusson).

developments the existing list now thirty years old. If approved, the new list will come into operation on April 1. The list is contained in the Report of the Committee on the Rating of Plant and Machinery (H.M. Stationery Office, price 2s. 6d.).

## Atomic Information

### PLANS FOR EASIER DISSEMINATION

TO make atomic information more easily available the United Kingdom Atomic Energy Authority is to make fuller use of microphotography. The effect will be to make all non-secret reports that have been prepared since 1947 readily obtainable. The Authority is also increasing its facilities for supplying reports in conventional form as they are prepared. From February 16 a large number of unclassified and declassified reports, hitherto obtainable only on loan from A.E.A. libraries, are to be available in micro form. Arrangements have been made with Micro Methods, Ltd., East Ardsley, Wakefield, Yorks, for the production of microcopies on card of all unclassified and declassified reports issued between 1947 and December 1956 and, on a continuing basis, of those reports issued since 1956 that are not available on sale from the Stationery Office. Microcopies may be purchased from Micro Methods as follows: All unclassified and declassified reports issued between 1947 and 1956, complete set, £120; the Atomic Energy Authority are presenting complete sets of those microcopies to overseas countries with which the Authority have active report exchanges, and sets are also being presented to the International Atomic Energy Agency, the European Nuclear Energy Agency and Euratom; unclassified and declassified reports (except reports for sale) issued January 1957 to June 1958, complete set, £14; unclassified and declassified reports (except reports for sale) issued July 1958 to June 1959, complete set, £9. Individual reports may also be purchased separately at 2s. per card. A list of all reports of which microcopies are available may be obtained from Micro Methods, Ltd. Paper copies of all currently issued unclassified A.E.A. reports may now be obtained against a running account from the library, Atomic Energy Research Establishment, Harwell, Didcot, Berks. Bills are to be sent quarterly covering reports dispatched in the previous quarter. Subscribers may order all reports issued or those in specific categories including biology and medicine; chemistry (general, radiation and radiochemistry); health and safety; instruments; physics and mathematics; radiation effects on materials.

## Beauty Treatment

### AN AID FOR TREATING MENTALLY ILL

THE therapeutic use of beauty treatment in mental hospitals was described by Miss E. Macdonald (a director, J. & E. Atkinson, Ltd.) in a lecture to the Society of Cosmetic Chemists in London on January 23. Miss Macdonald explained the evolution of the scheme which, since its inception in

July 1957, had been adopted by a dozen mental hospitals throughout the country. Already perhaps 5,000 treatments had been given. Several years ago, she said, she had noticed that women, once they had the idea that they could make themselves more attractive, not only became better groomed but became more poised and positive personalities. "It was not a far flight of imagination for me then to say—if we can do this for well women, how much more might we not be able to do for sick women." She thought that patients of mental hospitals would benefit particularly from beauty treatment, and Dr. George Somerville (medical superintendent, Goodmayes Hospital, Essex) agreed. Messrs. Atkinson lent their senior consultant to the hospital one day a week for six months, and a room was set aside and decorated as a beauty salon. The effect, particularly on the schizophrenic had been remarkable. An improved appearance could make the patient aware of the external world again and, by breaking down the sense of isolation, lead back to normality. Depressives, particularly middle-aged ones, could be helped, too. At the same time Dr. Somerville found the innovation had improved the whole atmosphere of the hospital. Nurses were taking more trouble with their appearance, and relations with relatives of patients were better. Nurses from that and other mental hospitals had since been given free fortnight's courses in beauty treatment by her company, and she had high hopes of extending the scheme into other types of hospitals: the treatment had already been tried effectively with spastics.

## Polio Research

### FURTHER GRANT FROM NATIONAL FUND

THE Medical Research Council has received a grant of £30,000 from the National Fund for Poliomyelitis Research. The money is being used to buy an electron microscope and an analytical centrifuge. Both are being installed at a virus culture laboratory at Crowthorne established with a previous grant and operated by the council's virus research group. Long-term research is being directed towards developing new poliomyelitis vaccines and finding alternatives to monkey-tissue cells for production purposes.

## SCOTTISH NEWS

### Catarrh Virus

#### RESEARCH IN GLASGOW

THE Royal Medico-Chirurgical Society of Glasgow recently heard a paper "Bronchiectasis—a Virus Disease" by Drs. G. Somerville (Glasgow University virus unit) and P. Macfarlane (Western Infirmary pathology department), in which they said that recognition two years ago by American workers of the adeno virus had been carried a stage further. The cause of the catarrh that followed measles and whooping cough had been narrowed to three of the eighteen types. The failure of chemotherapy and antibiotics always to influence the course of those conditions ran counter to the current belief that

secondary bacterial invaders were responsible for the condition.

## "Too Many Drugs"

### A PHARMACIST EXPRESSES CONCERN

COUNCILLOR G. Hedderwick, M.P.S. (chairman, Edinburgh Health Committee) gave warning on January 29 that Britain might become a nation too dependent on drugs. Speaking at a meeting of Edinburgh and Leith Old People's Welfare Council he said that while the treatment of the aged regarding mental health was much improved, he thought that young people might present a future problem. "I say this with respect to the medical profession, but when, as a pharmacist, you get a prescription with maybe 300 or 400 tablets on it, you sometimes wonder." There was a danger of a situation arising in this country much like that in the United States, where people needed drugs when they got up in the morning, were soothed by tranquillisers in the afternoon, and were put to sleep by narcotics at night.

## OVERSEAS NEWS

### UNITED STATES

#### Lederle Science Lecture

To bring outstanding men of science before its technical staff, the American Cyanamid Company's Lederle Laboratories division at Pearl River organises a series of annual Lederle science lectures. The opening lecturer last year was Sir Howard Florey. Sir Howard, after urging more effort in the study of fundamental biological changes in cancer and heart disease, illustrated with slides some of his own recent work showing the regeneration of damaged artery walls in experimental animals. He pointed out that "giant cells" many times the size of normal cells, and containing multiple nuclei, were characteristics of that regeneration.

### INDIA

#### Medicinal Plant Research

A COUNCIL of scientific and industrial research has been created in India with functions which approximate to the Government organisation in the U.K. At a recent meeting in New Delhi the Council accepted tentative proposals for a Central Indian medicinal plants organisation to organise and co-ordinate the cultivation of medicinal plants and in addition, by the use of grants, sponsor developments in cultivation and utilisation. A further development for the Indian Institute of Biochemistry and Experimental Medicine is the approval by the C.S.I.R. of the building of a new laboratory. Microbiology, biochemistry, physiology and pharmacology research work will thereby receive Government support in the new building. The medicinal plants organisation will temporarily be lodged at the Lucknow Central Drug Research Institute. Improved methods of cultivation as well as the development of new species are part of present plans. A medicinal plant herbarium and the screening of indigenous medicinal plants are further proposed activities.

**NEWS IN BRIEF**

EDINBURGH health committee have launched an anti-cigarette-smoking campaign.

SOUTHWARK Borough Council is seeking support for a campaign to prevent the sale of corrosive poisons to children.

A 15-MILLION-lb.-a-year maleic anhydride plant is being planned at Newport, Mon., by Monsanto Chemicals, Ltd.

A FOURTH amending law to Austria's General Social Insurance Law of 1956 has been passed introducing a 5-schilling charge for medical attention for insured persons.

A FIRE at the works of Rosedale Products, Ltd., Birkbeck Road, London, E.8, on February 4, destroyed 90 per cent. of the factory and caused damage estimated at £20,000. Cause of the fire is unknown.

MR. A. FRASER, M.P.S., who was stranded in Orkney by blizzards (C. & D., January 31, p. 107) reached Shetland in time for his marriage to Miss I. Miller as planned.

BECAUSE of the large number of deaths (110) in Heywood, Lancs., from leukaemia and aplastic anaemia during the past year, the town's medical officer of health is to carry out an investigation.

THE sixteenth edition of the Register of Orthoptists has been published by the Board of Registration of Medical Auxiliaries, B.M.A. House, Tavistock Square, London, W.C.1. It is free to registered medical practitioners, and is 5s. per copy to others.

A LARGE-scale development plant for the manufacture of high-quality silicon of semi-conductor grade is now in bulk production. The plant is operated by the general chemicals division of Imperial Chemical Industries, Ltd., on Merseyside.

A REFRESHER course for pharmacists, "Recent Advances in Pharmacy" is being held at Sunderland Technical College at 7.30 p.m. on Tuesday evenings commencing on February 17. The course deals with: Pharmaceutics of the B.P. 1958; radioisotopes; and electronic methods of sterilisation.

SUCCESSFUL candidates in the recent entrance examination held by the Pharmaceutical Society were: *Physics*, C. R. Douglas, Truro; R. N. Gooch, Hove; B. R. Lewis, Ty-Hir; Rosemary Morris, Worcester; Joan Prince, Ormskirk; *Chemistry*, D. H. Forrester, Forres; *Chemistry and Physics*, J. A. Staton, Chesterfield.

OVER 100 pages of tabulated data relating to the average cost of maintaining a patient in hospitals under the National Health Service are contained in the Hospital Costing Returns, year ended March 1958 (H.M. Stationery Office, price 30s.). In addition the principal direct expenses of individual departments are expressed in terms of cost per unit of work performed in the named hospitals. Average salaries and wages for the different types of hospitals are listed, but no similar figures are given in respect of drugs and dressings, etc.

**TOPICAL REFLECTIONS**

By Xrayser

*Counting the Cost*

A recent news item contained the interesting information that two hospitals in Lanarkshire which had been used as sanatoria were to be closed down. The fight against tuberculosis has been successful and it represents a triumph for research and for modern drugs. In 1855 the Registrar-General presented his first detailed report of causes of death in Scotland, in which he expressed concern over the number of deaths from consumption—7,129 in that year. Consumption was particularly prevalent, said Ferguson, in the large towns, Glasgow and Greenock being the worst. The report referred to the tradition that the Western Isles of Scotland were remarkably free from consumption, and the Registrar thought that his figures, though inconclusive, lent support to that view. Conditions of housing in the big cities in the nineteenth century were conducive to the spread of the disease. But, despite improved housing conditions in the past fifty years, there are still in this country large numbers of sub-standard houses in which disease can breed. The victory in tuberculosis has been achieved by drugs. Yet, answering a question in the House on prescription charges (p. 122), the Minister of Health said that, as a result of the change in the basis of patients' charges, he was satisfied that the burden on the Exchequer was less than it would otherwise have been. "Burden" seems to be an unhappy choice of word in relation to the success achieved by modern treatments. Although recent statistics indicate that the average expectation of working life of the male population increased 12½ per cent. between 1931 and 1955 I doubt if the pharmaceutical industry will receive its rightful share of praise for the achievement.

*Cholera*

About a hundred years ago cholera was another of the dread diseases. In 1853–54, Ferguson records 6,000 deaths in Scotland from Asiatic cholera. The Presbytery of Edinburgh asked Lord Palmerston whether a national Fast was likely to be appointed on Royal authority. Palmerston replied that he did not think that a national Fast would be suitable to the circumstances. "The Maker of the Universe," he wrote, "has established certain laws of nature for the planet in which we live, and the weal or woe of mankind depends upon the observance or neglect of those laws." He concluded that the best course that could be pursued was to plan and execute measures to improve sanitation, so that towns and cities might be "freed from those causes and sources of contagion which, if allowed to remain, will infallibly breed pestilence and be fruitful in death, in spite of the prayers and fastings of a united but inactive nation." A pointed reminder of man's responsibility!

*Travelling Shops*

The pattern of trading is constantly changing, and what are now regarded as "travelling" shops are commonplace today. There are many reasons for the development. The evacuation of what looked like permanent centres of population in the hub of cities; the urgent need of housing; the growth of large and sprawling housing areas remote from shopping centres; the revolution brought about by the petrol or oil-driven vehicle making it possible to transport large numbers over long distances; all have contributed to the radical changes in habits over the past two or three decades. Many will recall the limited mobile trading of the manually-propelled barrow, or its more opulent counterpart drawn by a horse or donkey, offering a limited range of goods that varied with the season. I have never forgotten a diverting scene on a spring morning when coal briquettes had given way to new season's rhubarb. The absent-minded assistant was still bawling yesterday's wares, and his employer was threatening physical assault. But the position today is vastly different, and many local trading associations are concerned over the trade lost to large vans that contribute nothing to the local rates. There is urgent need for review of the Shops Act, and pharmacists should support any local movement.

## NEW PRODUCTS AND PACKS

**On General Release.**—Merck Sharp & Dohme Ltd., Hoddesdon, Herts, announce the release of HydroSaluric oral diuretic agent, previously available only for clinical-trial purposes (see *C. & D.*, January 17, p. 33). HydroSaluric resembles Saluric (chlorothiazide) in activity, but is ten to twenty times more potent, weight for weight. It may also, like Saluric, be used as adjunctive therapy in the treatment of hypertension. HydroSaluric is issued in bottles of 100 and 500 25-mgm. and 50-mgm. white, scored tablets.

**For Would-be Non-smokers.**—Fassett & Johnson, Ltd., 86 Clerkenwell Road, London, E.C.1, are the distributors of a new product, Sinclair's Kurbs, described as "a new and effective

ground, and two new mottled colours in red and green have been introduced. All the models are available in four sizes, and have the company's new snap-on stopper and pourer lip.



At left: New flasks in the range marketed by Thermos, Ltd., London, E.10. At right: Counter display stand for the new Tattoo roll-on mascara launched by Fassett & Johnson, Ltd., London, E.C.1.



method of overcoming the smoking habit." The pack contains capsules for a one-month graduated course of treatment, and is accompanied by a unit crown.

**Nose and Throat Spray.**—W. B. Cartwright, Ltd., Rawdon, Leeds, announce an addition to their Penetrol range, Penetrol spray, presented in a pack consisting of a plastic container holding  $\frac{1}{4}$  oz. and having a tapered nozzle to give a fine spray to the nose and throat. The spray is individually cartoned and issued in a display box of one dozen.

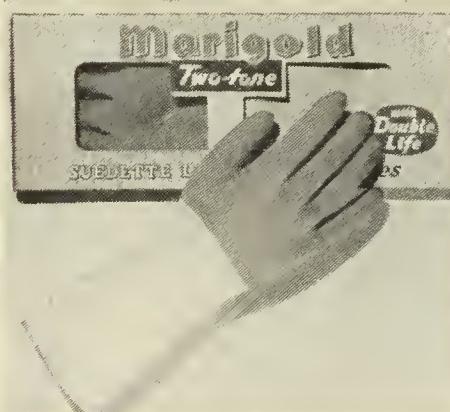
**"Junior"-size Towel Roll.**—Freeder Brothers Paper Mills, Brimsdown, En-

field, Middlesex, have produced a new "junior" size of their Kwickdry household paper towel rolls.

**New Vacuum-flask Models.**—Thermos, Ltd., Seymour Road, London, E.10, have added new models to their No. 15 range of vacuum flasks. The popular "World" design is now available with powder blue back-

**Roll-on Mascara.**—For their new Tattoo roll-on mascara, Fassett & Johnson, Ltd., 86 Clerkenwell Road, London, E.C.1, have devised a brightly coloured display unit that takes up small counter space. The mascara is available in four shades (black, light brown, dark brown and blue).

**Two-tone Household Glove.**—Claimed the biggest advance made by any manufacturer in the household rubber-glove field, the Marigold two-tone house glove, manufactured by the J. Allen Rubber Co., Ltd., Whitecroft, Lydney, Glos, is produced by a new manufacturing technique that gives in-



creased resistance to abrasion, detergents and grease. The glove is available in the varieties red hand with yellow gauntlet cuff and blue hand with yellow cuff. The glove has a full crêpe grip with suedette lining and is shaped to the natural curve of the hand. It is available in sizes  $6\frac{1}{2}$ , 7/small;  $7\frac{1}{2}$ , 8/medium;  $8\frac{1}{2}$  and 9/large. Three point-of-sale display units are available: a counter display and "dispenser" stand, facing both ways or forward only (capacity  $1\frac{1}{2}$  doz.); a showstand to display two gloves; and a printed display card.

**Household Aerosols.**—Mondart, Ltd., 49 Park Lane, London, W.1, are marketing a new aerosol range, Max air freshener, moth proofer and fly killer,

the first three of "the biggest range of aerosols ever planned."

**Royal Jelly Hand Cream.**—F. Farthing & Co., Ltd., 44 Queensway, London, W.2, are marketing Apilla "richly nourishing" hand cream containing royal jelly in standard (1-oz.) and boudoir ( $4\frac{1}{2}$ -oz.) sizes, both in green plastic jars. The standard size is issued in a display box of 1 doz.; the boudoir size is packed individually in a pink box.

**Three Twin Shaving Heads.**—New speed, new closeness and new comfort are claimed for the Rollectric shaver newly introduced by Remington Rand, Ltd., shaver division, 26 Kensington High Street, London, W.8. The shaver



is claimed to remove more beard at one stroke than any other shaver. While retaining all the best features of other Remington models, including "roller-combs," it now has "more heads, more cutters, more power." The Rollectric, which becomes available to the public from March 31, is being produced in standard and (later) triple-volt and auto-home versions. The three twin shaving heads house twelve rows of multiple cutting edges.

**"Overnight" Beauty Cream.**—Helena Rubinstein, Ltd., 3 Grafton Street, W.1, are launching a new "beauty overnight" cream designed to "nourish your skin while you sleep." The claim of the manufacturers is that the new product "will do more for your skin in two weeks than two years' normal care." It is packed in white and gold printed plastic 1-oz. and 2-oz. jars. For a limited period it is being offered to prospective users in a special night-and-day "duet pack" with "Skin Dew" emulsion at a reduced total price.

### Exhibitions

**NATIONAL BUSINESS EFFICIENCY EXHIBITION.** Olympia, London, W.14, from May 25 to June 4. About 120 companies have so far indicated that they are exhibiting. The organisers (Office Appliance and Business Equipment Trades Association) have removed their exhibition office to 64 Cannon Street, London, E.C.4.

## TRADE NOTES

**An Additional Size.**—Merck Sharp & Dohme, Ltd., Hoddesdon, Herts, have introduced a 500-tablet size of their corticosteroid speciality Decadron (dexamethasone). The 30- and 100-tablet packs continue to be available.

**Purchase Tax Protection.**—Lincoln Hair Products, Ltd., 55 Strafford Road, London, W.3, are operating a scheme whereby they will credit retailers (only) with the difference in purchase tax on any of the company's proprietary stock ordered from them between February 1 and April 5 and still unsold by the retailer at the later date.

**Redesigned.**—Nigroid Ferris, Ltd., Nordrach House, 292 Two Mile Hill Road, Kingswood, Bristol, have given a "face-lift" to the Nigroids container. The tin is of the same size as



formerly, and the elements of the previous design have been retained but simplified in presentation, with greater prominence and clarity given to the "flower of Bristol" emblem.

**Dispensing Unit.**—Harker Stagg, Ltd., Emmott Street, London, E.1, announce that, as the Customs and Excise authorities have reversed their original decision that Harker's disposable enemas should not attract purchase tax, in future the enemas are being sent out in a dispensing unit containing two enemas that is not subject to tax. The wholesaler's pack is still 3 doz. enemas (eighteen dispensing units). Where tax is chargeable, it is at the rate of 30 per cent. on price to retailer.

**PACKS AND CONTENTS:** Carton and tube in which Distolyt anti-cough tablets (S.4) and (right) display outer, carton and tube in which Zynocin sore-throat lozenges are issued by the Distillers Co. (Biochemicals), Ltd., London, S.W.19.



**Beauty Competition.**—One of the conditions of entry to a national beauty competition organised by the Brighton Corporation is that each entrant must purchase Vaseline liquid shampoo to the value of 3s. 6d. The first prize is a return flight to New York in a Comet IV.

**Tube Replaces Pill-box.**—Alfred Fennings, Horsham, Sussex, are now issuing their Little Healer in a printed



polystyrene tube instead of the previous pill-box. The tubes are issued twelve to a display outer.

**Trade Marks Dropped.**—Since December 15, 1958, Ward, Casson, Ltd., 15 Hay Hill, London, W.1, have ceased to use the trade names Deltalone, Hydrodeltalone and Coactyl. Prescriptions still specifying those preparations may now be met with the following:—Prednisone, enteric-coated tablets, buffered, 1-mgm. and 5-mgm. (Ward, Casson), formerly Deltalone; prednisolone, enteric-coated tablets, 1-mgm. and 5-mgm. (Ward, Casson), formerly Hydrodeltalone; prednisolone eye drops, 0·25 per cent. (Ward, Casson), formerly Hydrodeltalone eye drops; prednisolone eye ointment, 0·25 per cent. (Ward, Casson), formerly Hydrodeltalone eye ointment; prednisolone injection, 2·5 per cent. (Ward, Casson), formerly Hydrodeltalone injection; prednisolone with neomycin ointment, 0·5 per cent. (Ward, Casson), formerly Hydrodeltalone skin ointment; and prednisone with aspirin, buffered, 0·5-mgm. (Ward, Casson), formerly Coactyl.



### Bonus Offers

MONDART, LTD., 49 Park Lane, London, W.1. Max aerosols (fly killer, moth proofer, air freshener). 2½ per cent. on order for 1½ doz. (six of each); 5 per cent. on order for 3 doz. (twelve of each); 7½ per cent. on order for 6 doz. (free choice).

CIBA LABORATORIES, LTD., Horsham, Sussex. Trafuril cream. Twelve invoiced as ten (corrected note).

CULLINGFORD OF CHELSEA (Castle Soaps of Cambridge, Ltd.), Cheyne Walk, London, S.W.10 (distributors). Rotosan products range. 10 per cent. on order for 12 doz.; 7½ per cent. on order for 8 doz.; 3½ per cent. on order for 4 doz. For limited period.

### HORTICULTURAL DEPARTMENT

**Garden Insecticides.**—Cupal, Ltd., Blackburn, Lancs, are marketing a new range of garden insecticides, including Secto-Kil, presented as a 2-oz. liquid concentrate and as a 5-oz. aerosol, both containing malathion; and a new garden "powder pack" containing derris and dieldrin in press-gum powder container.

**Products for Gardeners.**—Three new gardening products are announced by Pan Britannica Industries, Ltd., Waltham Abbey, Essex. Greenfly and blackfly killer is a new malathion insecticide that kills a large range of garden pests, including not only green and blackfly but also caterpillars, white fly, red spider, weevils, etc. Claimed safe to use on nearly all plants it is issued in 2-oz. and 4-oz. bottles. Slug pellets are designed to lure slugs and snails away from cultivated plants to their death.



The pellets are long-lasting and shower-proof. In use they are scattered regularly among plants. The packs are of two sizes. Available for the first time in this country is an aerosol insecticide for killing both household pests (flies, midges, mosquitoes, wasps) and insects on plants (green, black and white fly and red spider). The can holds 6 oz. The company's established product Baby Bio had record sales in 1958. Baby Bio is claimed "easily the cheapest liquid manure for indoor plants sold today." A leaflet "How to Look After Your House Plants and Bulbs" describes more than twenty types of plants that can be kept in the home and the treatment that should be given them.

# MODERN PHARMACEUTICAL PACKAGING

## How the "life history" of a product influences choice of pack

A SUGGESTION that, in connection with the container allowance made to chemist contractors, it might be helpful if there were some form of co-operation between the Institute of Packaging, the Ministry of Health and the Pharmaceutical Society, was made at a meeting of the Leicester and Leicestershire Branch of the Society on January 13. Members of the Branch were taking part in a discussion on a talk on "Modern Packaging" by Mr. H. W. Fowler, B.Pharm., F.P.S., M.Inst.Pkg. (senior lecturer in pharmaceutics, School of Pharmacy, Leicester College of Technology).

### "Great Changes"

Mr. Fowler said that great changes had taken place in pharmacy during recent years and the character of products dispensed by the retail pharmacist differed considerably from those handled by his predecessors. That change had its effect on pharmaceutical packaging, with the result that the extemporaneous preparation in the corked medicine bottle and the chevette box of a few years ago was

giving place to "ethical" preparations produced by pharmaceutical manufacturers, many of whom used up-to-date methods of packaging with new materials. That trend was general and the growing emphasis on packaging in the past twenty or so years prompted the formation, in 1947, of the Institute of Packaging "to encourage and promote knowledge of the principles and practices of good packaging."

The practising pharmacist must often look at a new pack of a preparation and wonder why the style of packaging had been changed. While the superficial reason was obvious — that the new package was better than the old — that was an answer that begged the question since he was really interested in why the new package was better than the old. In order to be comparative, it was necessary to have standards for packages, to know what was expected of the package and to have some means of testing and evaluating the materials and the package itself. That demanded a scientific approach but it was important to temper the scientific method with systematic common sense.

## A QUARTER-CENTURY IN TUBES

### A Salford manufacturer's celebration

UNIVERSAL Metal Products, Ltd., Langley Road, Salford, 6, Lancs, are this year celebrating their silver jubilee. Formed in 1934 by Mr. E. G. Wertheimer for the manufacture of tin and lead collapsible tubes, Messrs. U.M.P. commenced production with a few machines and a handful of employees. The company is now a wholly-owned subsidiary of the Winterbottom Book Cloth Co., Ltd., and Mr. Wertheimer is the managing director and also a director of the parent company. Today the company employs approximately 1,200 people and claims to be the biggest single tube production unit in the Commonwealth, specialising in the production of soft-metal tubes, aluminium tubes and rigid containers. The origin of the company's extensive plastics division was the demand for plastic tube caps which a few decades ago started to replace metal closures. There has been

continuous and steady development from the beginning, and now the company is among the leaders in the plastics industry.

The company is organised and run by five controlling executive committees: Management, plastic sales, metal sales, production, research and development.

One of the most important sections is the research and development department which has developed with the company. It has enabled the company to organise a first-class customer service department and keep abreast of developments in plant, materials and operations in general. A particular feature is the free service in connection with customers' new products whereby recommendations as to the most suitable packages are made. Latest developments include plant for aerosol and pressure packaging, Monobloc containers, plastic bottles, plastic tubes.

Mr. Fowler then went on to detail the "life history" of a typical package (a dispensing pack of 500 tablets in an extruded aluminium container with a screw closure). He listed a possible twenty-six steps in the sequence of events leading to the placing of the dispensing pack on the dispensary shelf. After that the pack might be opened up to twenty times for the dispensing of the 500 tablets on individual prescriptions.

Examination of that history of the package would show that certain properties would be necessary: Protection (during storage, handling, transport; use); identification (in manufacture, storage, transport, use); presentation (of internal container, of carton, of external fibreboard carton); convenience (for package manufacturer, pharmaceutical manufacturer, carrier, wholesaler and retailer). In addition those properties must be obtained as economically as possible.

### Protection

Strength was an important package quality that was being increasingly emphasised in the plastic containers now coming into use. Many glass containers had been redesigned to improve their strength. When glass was blown it became pear shaped, and the glass was distributed to a layer of uniform thickness. When a bottle was formed in a mould, the glass was distorted away from that natural shape, with consequent local reduction in the thickness of the glass. Thus, square corners and more particularly acute angles gave points of weakness and many bottles had been redesigned with rounded corners and shorter necks, with sloping shoulders, to approximate more nearly to the pear shape. The newer styles of Winchester quart bottles were a good example of better distribution of glass around the bottle.

Plastic films had given the opportunity for providing better protection against moisture and rain, etc., during transport.

To obtain protection against atmospheric conditions (oxygen, humidity, etc.) a good closure was necessary. The cork was often porous and did not provide a satisfactory closure for long-term use, the screw closure being more commonly used for that purpose. The screw closure consisted of a cap with strong screw threads, the cap containing a wad that had to be resilient and preferably impervious, to avoid the possibility of mould growth. Cork, cork composition or card were often used for that. To retain the contents of the container, the wad was covered by a liner (a thin resistant layer of aluminium foil, plastic, impregnated paper, etc.). The surface which met the liner and wad must be free from irregularities or mould marks which would cause an imperfect seal. The correct degree of tightening was essential because the wad must be distorted to bring the liner in close contact with the neck.

(To be concluded)



At the company's works party on January 17 gold watches were presented to employees who had completed twenty-five years' service. Among them was Mr. A. Houghton, here seen (extreme right) with Messrs. H. Brickhill (deputy chairman), E. G. Wertheimer (managing director), M. Biddulph (technical manager), J. G. Wilson (executive director), T. H. Crane (manager).

## IN PARLIAMENT

BY A MEMBER OF THE PRESS GALLERY, HOUSE OF COMMONS

"I AM advised that not enough is known about the aetiology of asthma to provide the basis for organised preventive action. Treatment of this disease, as of others, has been facilitated by provision made under the National Health Service, but I have no means of measuring the success achieved," stated MR. DEREK WALKER-SMITH (Minister of Health) on January 28, in reply to a question by MR. HECTOR HUGHES. In another reply to the same questioner the Minister said that improved methods of control such as better case finding and the introduction of vaccination together with advances in treatment had strikingly reduced both incidence and mortality in tuberculosis.

### Drug Prices

MR. M. EDELMAN asked the Minister of Health what action his department was taking to stimulate competition by suppliers of antibiotics, psycho-active drugs and corticosteroids to hospitals with a view to reducing prices. THE MINISTER, in a written reply on February 2, stated that practically all antibiotics were supplied to hospitals on central contracts placed by his department and that manufacturers were constantly being pressed to reduce prices. For the rest, hospital authorities were encouraged to extend joint contracting schemes for the purchase of all supplies including drugs with a view to stimulating competition and securing the best value for money.

### Plant and Machinery Rating

MR. H. BROOKE (Minister of Housing and Local Government) stated on January 30, that he had now received the Report of the Committee on the Rating of Plant and Machinery (see p. 131). Section 24 of the Rating and Valuation Act 1925 empowered him to confirm the Committee recommendations with or without modifications. He intended to make an Order to take effect from April 1. Any representations on the Committee's recommendations should reach him not later than the end of February.

### Prices of Corticosteroids

MR. M. ORBACH, on February 2, asked the Minister of Health what caused the fall in prices in the supply of cortisone and cortisone derivatives during the second half of 1958, bearing in mind that there had been no important variation in prices for two years; to what extent was that due to competition? In his reply THE MINISTER referred to the reply given to Lieutenant-Colonel Bromley-Davenport on January 26 (C. & D., January 31, p. 112).

MR. READER HARRIS asked the Minister of Health if he would institute an inquiry into the rate of profit retained by corticosteroid manufacturers in the United Kingdom on supplies of those products to the National Health Service which was accepted as reasonable by the purchasing officers of his department prior to the recent drop in the prices of those drugs.

The Minister (MR. DEREK WALKER-SMITH): "No. Until July 1958, corti-

costeroids were purchased centrally by competitive tender and the prices were considered to have been fair and reasonable."

### Imports from the United States

MR. H. A. PRICE, on February 2, asked the MINISTER OF HEALTH whether, in the interests of the National Health Service expenditure, he would investigate the price at which raw material supplied to him had been imported from the United States of America by dependent American companies operating in this country; to what extent he was satisfied that those import costs reflected the true industrial cost and to what extent the prices paid by his department were proportionate to those industrial costs. In a written reply THE MINISTER stated that the raw materials were not purchased by his department but were imported commercially for manufacturing purposes. The prices of most proprietary preparations used in the National Health Service were already regulated by a scheme agreed with the pharmaceutical industry, under which their reasonableness was assessed according to various alternative formulas. SIR M. STODDART-SCOTT asked if the Minister was aware of the activities of certain U.S. companies in claiming freedom to extract high prices from his department for research, the cost of which was already included in royalties payable to their "mother companies" in the U.S. and where no active research was done in the United Kingdom: and whether he was satisfied that the high prices in question were not exorbitant. THE MINISTER in reply stated that he was not sure what the questioner had in mind, but he would be pleased to study any information he could provide.

MR. H. C. USBORNE asked on the same day what proportion of the total turnover of ethical pharmaceuticals were attributable to American controlled companies operating in the United Kingdom. MR. DEREK WALKER-SMITH stated that no precise information was available, but it was estimated that more than one-half by value of "ethical" proprietaries prescribed in the N.H.S. were supplied by British based subsidiaries of United States firms. He had no information regarding the royalties paid on ethical products to the U.S.

### Microbiological Research

Answering a number of questions on February 3, MR. HAROLD MACMILLAN (the Prime Minister) said that he would not consider transferring the responsibility for microbiological research from the Minister of Supply to the Minister of Health. The research was undertaken for defence purposes but any discoveries which had a bearing on general medicine were made available to the medical profession.

### Chemical Fertilisers

Relying to a question by MR. F. T. WILLEY on February 3, Mr. J. Rodgers (Parliamentary Secretary, Board of Trade) said that he expected to receive

the report of the Monopolies Commission on chemical fertilisers towards the middle of the year.

### Purchase Tax

Questions on the £500 purchase-tax-exemption limit were asked by MR. G. D. N. NABARRO, on February 3. MR. HEATHCOAT AMORY (Chancellor of the Exchequer), in a written answer, stated that the purpose of the exemption was to exclude cases where the cost of collection would not be worth while. The original exemption limit of £2,000 was reduced to £500 in November 1941, following complaints of unfair competition. Despite the change in the value of money, he was satisfied that £500 was still the appropriate level for the exemption.

## COMPANY NEWS

Last year's figures in parentheses

JOHNSON, MATTHEY & CO., LTD. Mr. P. G. Smyrk has been appointed a joint managing director.

FARBWERKE HOECHST. — The company is increasing its issued share capital from D.M. 462 millions (about £39 millions) to D.M. 556 millions (about £47 millions).

ASPRO-NICHOLAS, LTD.—Results for the September 1958 quarter are encouraging, state the directors, and a second interim Ordinary dividend of 6 per cent. (same) is announced.

DALMAS, LTD.—The company has been merged with Cyril Lord, Ltd. The following have joined the board of Dalmas, Ltd.: Messrs. Cyril Lord, W. H. McMillan, H. F. Morrison (chairman, vice-chairman and a director respectively, Cyril Lord, Ltd.), and Mr. T. D. C. Cordiner.

HICKSON & WELCH (HOLDINGS), LTD.—A final dividend on the Ordinary capital of 9½ per cent. for the year ended September 30, 1958, is recommended, making with the interim dividend of 4 per cent. already paid on smaller capital (prior to the bonus issue of £300,000 made in September 1958) an equivalent figure of 17 4/7 per cent. as compared with the total of 17½ per cent. for 1957. The directors have also declared a special interim dividend of 2½ per cent. in respect of the year ending September 30, 1959. Profit of the group, after charging depreciation of £97,612 (£86,196) is £547,223 (£506,325); taxation (including £23,000 set aside to reserve for benefit of initial allowances and after deducting £10,000 in respect of prior years no longer required), £286,599 (£254,211).

### New Companies

P.C. = Private Company; R.O. = Registered Office

BELGRAVE (MERCURY), LTD. (P.C.)—Capital £100. To carry on the business of mercury merchants, mercury refiners, etc. Directors: Simon Taub and Saul Solomons. R.O.: 2 Laurence Pountney Hill, London, E.C.4.

SALBRU CANINE PRODUCTS, LTD. (P.C.)—Capital £500. To carry on the business of manufacturers of and dealers in canine medicines, foods, etc. Subscribers: Raymond Howarth, 32 John William Street, Huddersfield, and Betty Walker.

## LEGAL REPORT

### Accompanied to the Border

A DRUG-addicted chemist was given twenty-four hours to leave Northern Ireland when he appeared at a Derry court on January 19. He was fifty-year-old Robert Burrows-Butler, said to be a chemist struck off the register, who admitted having uttered a forged document purporting to be a prescription for morphine sulphate tablets issued and signed by a Dr. R. W. Blake at the Royal Victoria Hospital, Belfast. Burrows-Butler, of no fixed address but stated to belong to Southern Ireland, asked that five other similar charges be taken into consideration. The resident magistrate imposed a sentence of six months' imprisonment on Burrows-Butler but ordered that the imprisonment warrant should not be executed for twenty-four hours to allow him to leave the court's jurisdiction. For the defence it was stated that Burrows-Butler had been a chemist but was now struck off the register. His misfortunes started fifteen years ago when he suffered from tuberculosis. In treatment he received morphine with disastrous consequences, for he had now reached the stage when morphine had become "part and parcel of him...." He thought he could legitimately obtain five grains of morphine a day but it appeared that that was incorrect.

"The tragedy is that, being denied morphia, he took to illegitimate means of obtaining it." An official of the Ministry said there was no machinery for registering a person in the United Kingdom as a drug addict. After the court proceedings police escorted Burrows-Butler to the border where he left for Dublin.

## BUSINESS CHANGES

ROBERTS WINDSOR, LTD., is the title newly adopted by Roberts Windsor Soap Co., Ltd., Windsor, Berks.

COSETTE (LINGERIE), LTD., manufacturers of sanitary protection garments, have removed to 45 Beauchamp Place, London, S.W.3.

A. P. BARNARD & SON, dispensing chemists, 309 Hackney Road, London, E.2, are to cease trading shortly.

MANCHESTER AND SALFORD CO-OPERATIVE CHEMISTS, LTD., have completed equipment of the pharmacy they took over recently at 3 Greenbrow Parade, Newall Green, Wythenshawe, Manchester, 23 (formerly owned by B. Lawson & Co., Ltd.).

JACOBSON VAN DEN BERG & CO., and LINDETEVES, N.V., Holland, have merged. Business, which was carried on so far by both separate parties is being continued under the name of Lindeteves-Jacobberg, N.V. For practical purposes, the names of various affiliated companies established outside Holland will remain unaltered.

### Appointments

LESLIE MARKS & CO., LTD., have appointed Mr. A. B. MacLaren, Finlay Chambers, 22A West Nile Street, Glasgow, C.1, to represent the company and its associate (Cresswell Bros.) in Scotland. Mr. J. Moir, Broughty Ferry, has retired after many years of service.

UNITED CHEMISTS ASSOCIATION, LTD., Cheltenham, Glos, have appointed Mr. Brinley R. Thomas, M.P.S. (who has represented the company in Liverpool, West Lancashire and Cheshire for the past ten years) representative in the South Wales area, and Mr. H. F. Roberts (previously in North and South Wales), has been appointed representative for North Wales and Cheshire.

TONI COSMETICS, a division of Gillette Industries, Ltd., Great West Road, Isleworth, Middlesex, announce that Mr. W. A. Turner has been appointed United Kingdom sales manager in succession to Mr. Alan Mackay, who is leaving for South Africa to take up a Gillette managerial appointment in that country. Mr. Leonard McCabe, formerly southern district sales manager has been appointed field operations manager.

## PERSONALITIES

MR. GRAESSER-THOMAS, who is a director of H. W. Graesser-Thomas, Ltd., 49 Leadenhall Street, London, E.C.3, has been elevated to the office of Upper Warden of the Worshipful Company of Horners which is the next step to becoming Master. Mr. Graesser-Thomas is a past chairman of the British Plastics Federation and a past president of the Plastics Institute.

MR. ERIC ELLIOTT, author of an article on "Aluminium in Packaging" (p. 143) is

chief metallurgist of the Aluminium Development Association, London. Following his education at Penistone Grammar School he was employed for twelve years with Thomas Firth & John Brown, Ltd., special steel

manufacturers and engineers, Sheffield, during which time he obtained his Associateship in Metallurgy by part-time study at the University of Sheffield. He joined the Aluminium Development Association as technical liaison officer in 1947, and following periods as information officer and metallurgist was appointed chief metallurgist at the beginning of 1958. Mr. Elliott is the author of a number of technical papers and articles, and is active in the work of various technical bodies including the British Standards Institution and the International Standards Organisation. He is a fellow of the Institution of Metallurgists and a member of the Institute of Packaging.

MR. H. PETERS, M.P.S., and Mrs. Peters, 77 Bradwall Road, Sandbach, Ches., celebrated their golden wedding on January 18. Mr. Peters was trained at the Manchester College of Pharmacy and qualified in 1908. He became a branch manager with W. Stanier, Ltd., chemists. On his retirement in 1957, his son, Brian, succeeded him as manager of the company's Sandbach branch.

Another son, Kenneth, is a representative with a firm of wholesale chemists.

MR. F. A. PAINE, B.Sc., F.R.I.C., author of an article on package testing (p. 145)

gained his B.Sc. (special) with second-class honours in chemistry at London University in 1942. He later qualified as a Fellow of the Royal Institute of Chemistry, and is at present a member of the Society of Chemical Indus-

try, the Society for Analytical Chemistry, and the Institute of Packaging. Mr. Paine is a member of the examinations subcommittee of the Institute of Packaging. He spent three and a half years in the control laboratory of a brewery, and then went to the Ministry of Supply Armaments Research Establishment (1941-46). He was then appointed packaging inquiry officer with the Printing, Packaging and Allied Trades Research Association where he remained for twelve and a half years before he took his present post with the packaging and conversion section of the Bowater Research and Development Co., Ltd., research division.

MR. FREDERICK T. DAY who writes on "Advances in Labelling" (p. 147) is advertising and publicity manager of Samuel Jones & Co., Ltd., London, makers of Butterfly brand gummed-paper labelling machines, etc., with whom he has worked in various capacities for more than thirty years. Mr. Day is the author of a

number of books on subjects relating to paper, printing, packaging, decoration, etc., and is a past student of the Bolt Court, Fleet Street, School of Printing and Paper Making. He successfully sat for the series of examinations of the City and Guilds of London. He is a member of a panel of lecturers for the Stationers' Association of Great Britain and Ireland on subjects relating to paper and a former chairman of two committees of the British Direct Mail Advertising Association of whose executive committee he is a member. Mr. Day is a Freeman of the City of London, a City Guildsman, and a Fellow of the Zoological Society.

MR. REGINALD GEORGE HOARE, M.P.S., who is to visit Ghana shortly (see p. 131) is the development director of the pharmaceuticals division of Imperial Chemical Industries, Ltd., Wilmslow, Ches. Mr. Hoare was with I.C.I. (China), Ltd., from 1946 to 1950



when he was appointed a deputy local director of I.C.I. (Export), Ltd., Djakarta, Indonesia, returning to Britain in 1953. During the 1939-45 war he served with the Indian Army, with the rank of major.

**DR. A. H. BECKETT** (reader in pharmaceutical chemistry, School of Pharmacy, Chelsea College of Science and Technology) has been awarded the degree of Doctor of Science of the University of London for his work in the field of medicinal and pharmaceutical chemistry.

## MARRIAGES

**HALL—ARMISHAW.**—At St. Barbara's Church, Earlsdon, on January 15, William Thorneycroft Hall, M.P.S., 18 St. Andrew's Road, Earlsdon, Coventry, Warwickshire, to Valmai Jocelyn Armishaw, 64 Stevechale Avenue, Coventry. Mr. Hall is in business with his father at 35 Stoney Stanton Road, Coventry.

## DEATHS

**CUMMINS.**—On January 19, Mr. James Cummins, M.P.S., 8 Ivy Drive, Alkrington, Middleton, Manchester, Lancs. Mr. Cummins, who was a Freeman of the City of London, qualified in 1913.

**DRING.**—On January 23, Mr. Henry Dring, M.P.S., 12 Wellington Street, Teignmouth, Devon. Mr. Dring qualified in 1888. Before opening his business in Wellington Street about fifty-seven years ago, Mr. Dring managed a pharmacy in Johannesburg, South Africa.

**FUGE.**—Recently, Mr. Walter Thomas Fuge, M.P.S., 175 Staines Road, Laleham, Middlesex. Mr. Fuge qualified in 1895.

**GRAYSON.**—Recently, Mr. Charles Grayson, M.P.S., 10 The Grove, West Hartlepool, co. Durham. Mr. Grayson qualified in 1906.

**HARRIS.**—On January 14, Mr. John Christopher Harris, M.P.S., 81 Leyland Road, Penwortham, Preston, Lancs, aged sixty-nine.

**HIRST.**—On January 24, Mr. Stuart A. Hirst, Craigside House, Grasmere, Westmorland, aged 81. Mr. Hirst was a director of Stuart Hirst, Ltd., advertising agents, Bond Street, Leeds. For 35 years he was also associated with C. E. Fulford, Ltd., manufacturing chemists, Carlton Hill, Leeds, of which he later became a director. In 1929 he was elected a Liveryman of the Worshipful Company of Feltmakers and a Freeman of the City of London.

**HOMER.**—Suddenly, on January 28, Mr. Charles Bernard Homer, M.P.S., 22 Clumber Street, Kirkby, Notts, aged sixty-four. For many years Mr. Homer had been in charge of Timothy Whites & Taylors, Ltd. branch, Kingsway, Kirkby-in-Ashfield, Notts.

**KINGSTON.**—On January 25, Mr. Richard Kingston, M.P.S.I., Raphoe, co. Donegal, Eire. Mr. Kingston qualified in 1900.

**McLAREN.**—In hospital on January 22, Mr. Pringle Tait McLaren, M.P.S., 21 Warriston Gardens, Edinburgh. Mr. McLaren qualified in 1925.

**LUCAS.**—On January 29, Mr. Harry Lucas, F.P.S., 43 Charminster Avenue, Bournemouth. Mr. Lucas was formerly principal of the South of England College of Pharmacy, London. In 1888 he was apprenticed to Mr. J. Bienvielle, Southampton, spending most of it in a branch business at Andover. Later he was for three years an assistant with Mr. D. P. Roberts, North End, Croydon, before qualifying in 1895 and taking the Major examination the following year. During his period of study for the Major he acted as demonstrator at the Northern College of Pharmacy, Manchester, and in the same year joined the staff of the Metropolitan College of Pharmacy, Kennington, London, under Mr. W. Watson Will, with whom he remained for ten years. In 1906 he founded the South of England College.

*Mr. J. Foster Firth* writes:—My wife and I were students under Mr. Harry Lucas at the South of England College of Pharmacy. His was a lovable nature. Slight in build, sprightly of foot, agile in his actions and in repartee, he had a fatherly quality which endeared him to all who came under his tuition. Mr. Lucas could make or take a joke, and one remembers clearly his delightful if rather impish smile. On one occasion, when we students rescued an old gramophone horn from a dustbin in the Clapham Road, and placed it on the demonstration bench before the botany lecture with the inscription "Nat. Order. Convolvulaceæ," he enjoyed the prank as much as we did. He excelled in botany, and the occasional botanical rambles in the Orpington area were enjoyed and appreciated by those of us who accompanied him. Harry Lucas was an outstanding personality in his sphere, and the many students who qualified under him owe him a debt of gratitude.

**McCRONE.**—The large congregation which attended the funeral of Mr. Robert McEwan McCrone, F.P.S., 9 Main Street, Coatbridge, Lanarks, whose death was reported last week (C. & D., January 31, p. 113), included representatives of the Scottish Department of the Pharmaceutical Society, the Board of Examiners for Scotland, and the Glasgow and West of Scotland Branch.

*Dr. George H. Macmoran* writes: By the very sudden death of "Bob" McCrone, Scottish pharmacy has lost one of its outstanding figures. For



many years he had been a member of the board of examiners, one of the few practising pharmacists remaining, and his kindly manner accompanied by a pawky humour put many nervous candidates at their ease. His sound common sense, his practical approach to a problem, his considered judgment and his wide experience will be sadly missed. He was a loyal supporter of all pharmaceutical activities, and on many occasions, frequently in wintry weather, he made the thirty-six mile journey from Coatbridge to Edinburgh by road to attend the Evening Scientific Meetings of the Scottish Department. Apart from his interest in the subjects of the lectures, he loved to meet his fellow pharmacists on such occasions. No pharmaceutical social function in Glasgow or Edinburgh was complete without him, and he was often in demand as an after-dinner speaker. His ready wit, his fund of humorous stories and his jovial manner made him a delightful companion. He had a great capacity for making friends in all circles in which he moved—and his death will leave a gap in many lives. Apart from pharmacy his interests lay in the Church (of which he was an elder) and in the Rotary movement. He truly kept to the motto of the latter, "Service before Self."

**RELPH.**—On February 2, Mr. Samuel Relph, M.P.S., 10 Drake Road, Westcliff-on-Sea. Mr. Relph qualified in 1911.

**ROBERTSON.**—Recently, Mr. Andrew F. Robertson, M.P.S., Rose Cottage, Crossgate Moor, co. Durham. Mr. Robertson, who qualified in 1920, was in business for many years in Chester-le-street, Durham.

**SADLER.**—On January 17, Mr. Frank William Sadler, M.P.S., 26 Titian Road, Hove, 3, Sussex, aged eighty-seven. Mr. Sadler served his apprenticeship in Ipswich and after qualifying opened a pharmacy in Portland Road, Hove, in 1895. The business is now carried on by his son, Mr. J. D. Sadler, M.P.S. Mr. F. W. Sadler retired about a year ago.

**STEVENSON.**—At his residence, 51 Osborne Gardens, Belfast, on January 19, Mr. Alfred William Stevenson, M.P.S.N.I. Mr. Stevenson qualified as a registered druggist in Dublin in May 1891, and as a Pharmaceutical Chemist in Northern Ireland in 1926. He served his apprenticeship with William Dobbin & Co., Ltd., North Street, Belfast, and later became manager of Haslett's shop in Bradbury Place, Belfast, buying the business in 1917. His son, Mr. Alfred Stevenson, M.P.S.N.I., is carrying on the pharmacy.

**TEESDALE.**—On January 28, Mr. James Wilson Teesdale, M.P.S., 18 Riversdale Crescent, Edinburgh, 12. After serving an apprenticeship in Berwick-on-Tweed, Mr. Teesdale qualified in 1919. He was on the staff of T. & H. Smith, Ltd., Edinburgh, for about thirty-five years until he retired three years ago. He was a life-member of the Pharmaceutical Society.

**THOMAS.**—On January 14, Mr. Gwyn Thomas, M.P.S., 70 Tavistock Street, Bedford, aged fifty-five.



## DRUGS OF NEPAL

### Observations of an economic botanist

QUANTITY rather than quality has been the feature of the drug export business of Nepal. That was the general impression given by Mr. K. R. Fell (senior lecturer in pharmacognosy, Bradford Institute of Technology) when he addressed a meeting at the headquarters of the Pharmaceutical Society on January 28. Mr. Fell spent four months in 1957 as economic botanist to the Government under the provisions of the Colombo Plan. His commission was to investigate the practicability of exploiting, on a commercial scale, crude drugs indigenous to Nepal.

One merchant alone in 1956, he said, exported 37 tons of rhubarb which, at a price of 54s. per 82 lb., represented a value to him of over £2,700. That was probably only one-tenth of the rhubarb exported from the country. Other important figures were: Nardus root, 1,000 maunds (36 tons); the rhizome of wall fern, 805 maunds; Indian valerian, 450 maunds; lobelia, 275 maunds; aconite, 118 maunds; chiretta, 250 maunds (of which somewhere between 2-5 tons a year come to Britain from Asia); beeswax, 35 maunds; and *Orchis incarnata*, 40 maunds. Virtually the whole of that material went into the Indian domestic market, and little either came to, or would be acceptable in, this country. Practically the whole of it was collected from wild plants by collectors who would not always be able to distinguish correctly the material they were gathering, and the amount of cultivation of drugs in the country was not at present significant.

#### Economic Importance

The importance of botanical drugs to the population of Nepal was not to be underestimated. At least 96 per cent. of the population relied on indigenous medicines obtained from plants. The ayurvedic system of medicine prevailed, though Buddhism as well as Hinduism was practised in the country. Apart from medicinal plants, there were other drugs under the general description "minor forest products" (beeswax, honey, black catechu, etc.). In total, crude drugs represented perhaps one-tenth of the exports of Nepal. The country's Department of Botany itemised seventy natural drugs in its catalogue, and the catalogue of one merchant gave prices for about forty. Even the few items cultivated (ginger, turmeric, capsicum) were rather in the field of spices than of drugs and their preparation for the market was by Western standards poor.

The enormous geographical and economic handicaps of Nepal had, of course, to be recognised. Access to the country had never been easy, although in the past decade it had been made rather easier by the construction of a road from India (the first into the country), and by a limited number of air services. Most of the material exported from the country was still carried over tracks which, for all their rough mountainous character, were to Nepal the economic equivalent of the main trunk roads in Great Britain. In shape,

Nepal was roughly a long, narrow rectangle that could be divided into three parallel regions. The southernmost was relatively flat, with a climate like that of northern India. The middle region ("typical Nepal") was a region of hills and valleys with the small Kathmandu valley as almost its only flat area. Here the climate was more temperate, and such plants as foxglove, capsicum, turmeric, ginger, castor, eucalyptus and camphor were common. The third, northerly region was that of the "eternal snow," with a tree line at 13,000 ft., alpine plants to an altitude of 14,000 ft., and a permanent snow-line at 19,000 to 20,000 ft. Just as there were enormous variations in altitude, so there were corresponding variations in the flora. It could be said that collection of wild plants was extensive everywhere. Hospitals were few and pharmacy as we know it in Britain was virtually non-existent. There were some shops that formed a sort of hybrid between drug store and pharmacy: they were unlike a pharmacy in having no pharmacist on the premises and unlike a drug store in that antibiotics, and drugs which in this country would be under Schedule 4, could be easily bought, the only limiting factor being the cost. Only two drugs (morphine and

cocaine) came under official control, though it could not truly be said that the free sale of antibiotics had official approval. Any dispensing was done by "compounders" usually trained in India. In the whole country there were at the time of Mr. Fell's visit only five pharmacists (one per 1,700,000 of population), and it was an ironic commentary on the situation that even one of those five was unemployed. Any standardised galenicals used in the hospitals were imported from India, because in Nepal standards and research work were entirely absent. There was no pharmacopœia, and only a limited herbarium in the Nepal museum or in a tiny pharmacognostical museum in the Department of Botany.

For any real progress to be made in the field of drug plant cultivation a list of Nepal plants was urgently needed. So were proper drying facilities for the drugs. It was possible that the growth of species of *mentha* and solanaceous plants might be fostered, but it was necessary also that the hill people should be educated in identifying plants. A portable projector might be useful in that connection.

MR. J. W. FAIRBAIRN, Ph.D., who presided at the meeting, said that the attendance, which included not only pharmacists but drug merchants and buyers, teachers of pharmacy and students, was a sign of the reawakened interest in plant medicine.

## NATIONAL HEALTH SERVICE COSTS

### "Prescribers' Notes" gives some comparative figures

THE costs to the National Health Service of ferrous sulphate tablets and tablets containing other ferrous salts are listed in the latest issue of *Prescribers' Notes* which is dated November 1958. The listing of them was prompted by the statement, in a paper presented by Sir Stanley Davidson and Dr. John Richmond, that ferrous sulphate raises the haemoglobin level as effectively as ferrous gluconate and ferrous succinate and, when given in comparable doses of elemental iron, is no more liable to cause side effects. The Ministry also gives details of similar costs of certain preparations containing "liver or stomach," though commenting that it knows of "no scientific reason which justifies the addition of these ingredients to preparations for iron-deficiency anaemias." The *Notes* contain criticism of wasteful prescribing, and site as an example a call for 40 fl. oz. of mist. pot. cit. et hyoscy., which will not keep, and refers to the danger that might result from prescribing 250 pethidine tablets, 50 mgm., or 500 phenobarbitone tablets, gr.  $\frac{1}{4}$ . There is also reference to the fact that tablets of fluorocortisone acetate are only available in this country under the trade mark Florinef, though other brands may come to be distributed in the future. Doctors are reminded it is most convenient to all concerned if, in view of the large number of trade names applied to those compounds, they simply prescribe preparations of corticosteroids without specifying any particular brand. A list of proprietary names is given, together with the equivalent B.P., B.P.C., and

approved names. Under a section headed "Some Questions and Answers," figures are given which relate to the National Health Service in England and Wales. The approximate cost of drugs and dressings in 1956-57 was £58·5 millions gross; £51 millions net (prescription charges yielded £7·5 millions). For 1958-59 the estimated cost is £65 millions gross (£54 millions net). 207 million prescriptions were written by doctors in 1957. The average annual figure of the past ten years is 215 million. The estimated annual cost of prescriptions for antibiotics is about £10·5 millions, and for corticosteroids about £5 millions, based on a sample of prescriptions issued during the period March to June 1957. The average cost of a prescription was 5s. 10½d. in 1957, and about 6s. 3½d. in the first half of 1958. The average cost of drugs and appliances prescribed during 1957 per person on the prescribing list of general practitioners was about 29s. 3d.; during the first half of 1958 the figure was at the rate of 31s. annually.

## MANUFACTURERS' ACTIVITIES

**Customers' TV Outing.**—Kimberly-Clark, Ltd., Larkfield, nr. Maidstone, Kent, in conjunction with Tyne-Tees Television, recently arranged for a number of their customers to visit the newly opened television studios at Newcastle-on-Tyne. After a tour of the studios and talks by various personnel on the techniques of television, the visitors were shown the Kleenex "commercials."

## FIGURES IN THE PHARMACEUTICAL WORLD

THE recently appointed president for 1959 of the Proprietary Articles Trade Association comes to his office with a sound knowledge of and experience in the trade. His immediate apprenticeship for the position has been, for Mr. N. C. Jeffery, M.P.S., as for every P.A.T.A. president, a three-year period as chairman of a section: in his case the manufacturers' section of the Association. He there represents his company, The British Drug Houses, Ltd., and has done so for eleven years that have elapsed since his predecessor in that capacity—the late Mr. J. D. Bohn—retired. Mr. Bohn's name has an honoured place in the annals of the P.A.T.A., and it was appropriate that Mr. Jeffery should succeed him because it was as assistant to Mr. Bohn in the packed goods department that he first joined the company in August 1938. He remained in the department for two years, but in the war conditions of 1940 was transferred to the home sales department. Then came war service: with the Royal Air Force (on its radio-communications side), which eventually took him across North-west Europe from Normandy to Hamburg, and nearly took him to the Far East when the surrender of the Japanese brought hostilities in that field to an abrupt end and cancelled his journey. Coming out of the Forces in 1946, Mr. Jeffery returned to the B.D.H. Shortly afterwards he was appointed merchandising manager with particular interests in the field of marketing. In that capacity he has remained. The work in that field makes him, it could be said, as familiar with the problems of wholesale distribution as with those of manufacture, but what is perhaps more important in his presidential year at the P.A.T.A. is that, in his twenty years on the manufacturing side, he has been at pains not to lose sight of the problems of pharmacists in retail business which were once his own. He has done so by active membership of the Thames Valley Branch of the Pharmaceutical Society, of which he was secretary 1953–55, and passed at once for a similar term into the chairmanship of the Branch and presidency of the Association.

Mr. Jeffery entered pharmacy at a time when employment prospects in his native Northampton were not too good. The town was, in 1929, very much a one-industry town (only later did light engineering become a substantial provider of employment) and in the late 'twenties the boot and shoe trade was not one of the most prosperous.

It was that attitude rather than the "vaguely scientific bent" he showed at school (the Northampton Town and County, now Northampton Grammar School) that led to his seizing an opportunity that occurred, suddenly, and as it were by accident, of taking up a four-year apprenticeship with Philadelphia Jeyes & Co., Ltd. It was served at the company's head pharmacy at the Drapery, Northampton, and, as would be expected from so highly regarded and long-established a pharmaceutical business, it gave him a many-sided training that took in manufacture,



70. MR. N. C. JEFFERY

wholesaling and the veterinary side as well as practical pharmacy according to the best professional standards. In 1934, after a year as "improver" at the company's Kettering branch, he enrolled as student at Nottingham University and in 1935 passed the Chemist and Druggist Qualifying examination, gaining also the University's prize in dispensing. His first move on qualifying was a bold plunge into retail management by opening on the outskirts of Horsham, Sussex, a branch pharmacy for Mr. Trevor Cale, whose main pharmacy was then on the Carfax, Horsham. Then, to widen his acquaintance with retail pharmacy, and more especially to gain the much-vaunted "London experience," he took a post with Lewis & Burrows, Ltd., at whose Kensington branch he remained for eighteen

months before applying for, and securing, the already mentioned vacancy in Mr. Bohn's department at the B.D.H. He is the present chairman of group A1 (drugs and tablets) of the Association of British Pharmaceutical Industry, and as such a member of its Council.

If the reconstitution of the P.A.T.A. in 1956 could fairly be described as the adoption of a policy of *reculer pour mieux sauter*, the period of adjusting ideas to the new conditions may now be about to give way to livelier activity along the new lines. Mr. Jeffery will have the full confidence of his colleagues in applying himself to the tasks ahead. To his ample understanding of what is needed are added a quiet faith that the work is worth doing, and a high degree of personal charm—always an asset in a tripartite organisation.

## NOTES ON NEW MEDICAMENTS

**ALCOS-ANAL.**—*Constituents:* Sodium salts of unsaturated fatty acids derived from cod-liver oil, chlorthymol, and ethyl *p*-aminobenzoate. The product is claimed to produce a mild aseptic inflammation, stimulating increased growth of connective tissue around any varices that may be present. At a later stage some shrinkage of the tissues occurs, so that small varices disappear, and larger ones become merely painless sclerosed nodules. The sodium salt of morrhuate acid (a certain fraction of the fatty acids of cod-liver oil) has also been used as an injectable sclerosing agent. Other preparations for the local treatment of haemorrhoids contain astringent and decongestive constituents, and Anusol, Anaroids and Medicoids are representative products.

**ALGISPRAY.**—*Constituents:* 2-hydroxyethyl salicylate; diethylamine salicylate and methyl nicotinate. The formulation of these medicaments in an aerosol form permits rapid absorption and maximum response from a minimum application. A mild erythema is produced when the spray is applied to the skin, and this promotes absorption of the salicylate without massage. The product is of value in treating painful areas, and lends itself for use by infirm patients. Other preparations containing similar constituents, but presented as more conventional products include Algipan, Cremalgin, Neonol, Rubriment, Salbin, Trafalgin, Transvasan and Vasocutonex creams. Intralgin is a liquid preparation containing benzocaine and salicylamide. Analjol, Methylaspriodine, Radosene and Saliode are also products containing acetylsalicylic acid derivatives.

**CORANGIL.**—*Constituents:* Glyceryl trinitrate, pentaerythrityl tetranitrate, dihydroxypropyl, theophylline and papaverine, presented as a "cored" tablet, designed for immediate relief followed by sustained action of the slower-acting constituents. Other products for use in angina pectoris and containing organic nitrates include Angised, Erythren, Sedovas, Antipressin, Mycardol, Pentoxylon, Peritrate, Dolorin, Stolie.

**DECADRON.**—*Chemistry:* 16 $\alpha$  - Methyl - 9 $\beta$  - fluoro-prednisolone, or dexamethasone. Methylation often enhances the activity of a drug, as exemplified in the reduced dose of methylprednisolone. Halogenation with fluorine, as in triamcinolone (Adecortyl, Ledereort), produces similar effects. When both means of increasing activity are applied to prednisolone, a product of exceptional potency, dexamethasone, is obtained. It is claimed to be seven to ten times more potent than the parent compound, prednisolone, and to have markedly reduced side-effects. Dexacortisyl is a similar product. (C. & D., January 17, p. 68.)

**DIABINESE.**—*Chemistry:* 1-(*p*-chlorobenzensulphonyl)-3-propylurea or chlorpropamide. It was noted in the early days of sulphonamide therapy that sulphanilamide had some hypoglycaemic properties, though later compounds did not exhibit those effects. In recent years other hypoglycaemic sulphonamides, such as BZ 35 or carbutamide, and later tolbutamide, have been introduced for the oral treatment of diabetes mellitus. Carbutamide proved to be too toxic for clinical use, but tolbutamide was better tolerated, and did not cause the skin rashes, fever and other reactions that followed the use of carbutamide. Chlorpropamide has a similar action to tolbutamide, but has an increased potency, and that is associated with a slower rate of excretion. The effects are therefore prolonged, and single daily doses of the drug are usually adequate. Like tolbutamide, chlorpropamide is not a true substitute for insulin, but certain types of diabetes mellitus may be controlled by oral therapy, which in selected cases, can be of considerable value. Tolbutamide is also known as Rastinon. (C. & D., January 17, p. 69.)

**FRAMYGEN.**—(Framycetin sulphate in a water-miscible base). An antibiotic that derives from a strain of *Streptomyces decaris*. Systemically toxic, it is valuable and effective by topical application, being active against staphylococci (including strains resistant to other

See "Guide to New Medicaments," pp. 154-55

antibiotics), the *Proteus* group and *Pseudomonas pyocyanea*. Framycetin is stable in solution, and the risk of skin sensitisation from its use is slight. Soframycin ointment is a similar but stronger product containing 1.5 per cent. of framycetin sulphate. (C. & D., January 17, p. 69).

**HEXOPAL.**—*Chemistry:* meso-inositol hexanicotinate. This substance is a long-acting peripheral vasodilator, but unlike many other drugs of this type, does not produce general vasodilation. It exhibits a specific action on vessels in spasm or constricting; a valuable effect, particularly in cold-sensitive tissues, with considerable potential therapeutic value. Other vasodilator drugs exhibiting chemical relationships include nicotine alcohol (Ronicol), and to a lesser extent nicotine acid. Nicotinamide has no vasodilatory effects. Other active drugs are represented by tolazoline (Priscol), azapetine (Ildar), phenoxybenzamine (Dibenylene), phenolamine (Rogitine), nylidrin (Peridilat, a derivative of ephedrine), Cyclospasmal (trimethylcyclohexyl mandelate) and Opilon. Ganglionic blocking agents include hexamethonium bromide (Vegolsen), pentolinium (Ansolsyn) and trimetaphan (Arfonad).

**INFLUENZA VIRUS VACCINE.**—Vaccines of the influenza-virus type are prepared by culturing the virus in developing chick embryo. The virus is inactivated by formalin and subsequently concentrated. The vaccine is polyvalent, that is, prepared from more than one strain of virus, and so affords a greater measure of protection. As the vaccine is prepared from chicken eggs, it should be used cautiously, if at all, in patients sensitised to chicken egg or protein. Influenza virus vaccine (mixed) is also issued by Glaxo Laboratories, Ltd., and Parke, Davis & Co., Ltd.

**MEZURAN.**—*Constituents:* Sulphadimidine and phenyl-azo-diaminopyridine hydrochloride. The value of sulphadimidine, well-known to be of value in urinary infections, is combined with an effective urinary analgesic, controlling the pain frequently associated with urinary tract infections or following genito-urinary surgery. Other sulphonamides used in urinary infections are sulphacetamide (Albueid, Steramide), sulphfurazole (Gantrisin), sulphamethizole (Uroluosil), and sulphasomidine (Elkosin). Sulphamethoxypyridazine (Lederkyn, Medicil) is a long-acting sulphonamide, effective in single daily doses. Nitrofurantoin (Furadantin) is an example of a different type of urinary antiseptic, and Pyridium is another preparation of diamino-phenyl azopyridine, used as a urinary analgesic.

**(PALFIUM).**—*Chemistry:* 3-Methyl-2, 2-diphenyl-4-morpholino-butylpyrrolidine M.C.P. 875 (dextromoramide). A potent analgesic, with the advantage that it lacks central depressant activity; and there is, as a result, no mental clouding. Full doses may be given without significant effects on the respiration. Development of tolerance to dextromoramide is slow, and addiction is less likely than with morphine or pethidine. It may prove of considerable value in the treatment of severe pain when less potent analgesics have failed. Other morphine-like analgesics include levorphanol (3-hydroxy-N-methylmorphinan tartrate) or Dromoran, dihydromorphone (Dilaudid), oxycodeone pectinate (Proladone), dihydrocodeine bitartrate (D.F. 118), methadone (Physetone), phenadoxone (Heptalgin), and dipipanone (Pipadone). (C. & D., January 17, p. 68.)

**THORPAX.**—*Composition:* Dimethoxanate hydrochloride and isothiopendyl hydrochloride in a flavoured syrup. The former compound is a powerful cough centre depressant with mild antispasmodic activity; the latter is an effective antihistamine relatively free from sedative effects. It is included in this cough syrup to alleviate cough associated with allergy, and to reduce the congestive symptoms of viral infections of the upper respiratory tract. Other cough-centre depressants include preparations

of pholcodine (morpholinylethyl-morphine) as Ethnine, Hewfolco, Tusseprin, Coolobel; preparations of narcotine (noseopine) as Cosecopin and Nicolane. Carbetapentane (Toclase), oxeladin (Pectamol), Taoryl, Tessalon, Sedulon and Beccantyl represent other types of cough centre depressants. Diphenhydramine (Benadryl) has also been used as an antispasmodic in cough.

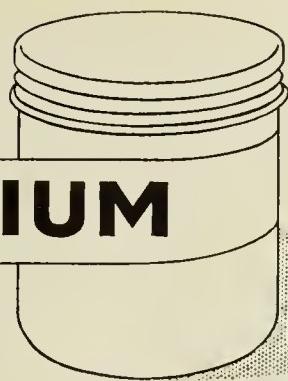
**TRINURIDE.**—*Constituents:* Diphenylhydantoin, phenylethylacetyleurea and phenobarbitone. Diphenylhydantoin, or phenytoin, is used in the treatment of epilepsy, and when combined with phenobarbitone results in an improved therapeutic response. This potentiating effect is enhanced by a new anticonvulsant, phenylethylacetyle urea, the ethyl derivative of phenacetimide. Phenacetimide has also been employed in epilepsy but suffers serious side-effects, thereby restricting its application to severe epileptic conditions not controlled by other drugs. The new compound has lower toxicity uncomplicated by drowsiness or bradycardia. Other preparations containing more than one anticonvulsant include Epanutin (phenytoin) and Phenobarbitone capsules, Comital (phenytoin and methylphenobarbitone), Comital L (phenytoin, methylphenobarbitone and phenobarbitone) Hydantal (methoin and phenobarbitone), and Nydrane Co. (benzchlorpropamide with phenobarbitone). (C. & D., November 1, 1958, p. 481.)

**VARIDASE BUCCAL TABLETS.**—*Constituents:* Streptokinase and streptodornase. Those substances are enzymes derived from cultures of haemolytic streptococci. The former liquefies clotted blood and fibrinous exudates, and the latter liquefies pus. Normally the formation of fibrin at an injury site is a part of the body defence mechanism, and eventually natural enzymes eventually break it down and absorb it. The fibrin formation can delay healing by preventing the access of blood to the damaged area. Streptokinase breaks down any fibrin and blood clots, reduces oedema, relieves associated pain, and favours tissue penetration by systemic antibiotics. The enzymes are inactivated by the gastric juices, but well absorbed by the buccal mucosa. Buccal tablets offer an alternative when injection of enzymes is undesirable. Dornokinase and Varidase are preparations of streptokinase and streptodornase intended for topical application or local injection.

**VIOMYCIN.**—This tuberculostatic antibiotic has several properties similar to those of streptomycin, but has the advantage of being active against streptomycin-resistant strains of *Mycobacterium tuberculosis*. Its chief therapeutic application is those cases where other anti-tuberculous drugs are ineffective. Viocin is another brand of viomycin sulphate. Vionactane is a mixture of viomycin sulphate and viomycin pantothenate. It is claimed to be better tolerated when injected, and to cause less side effects than the sulphate alone. Other drugs that have applications in the treatment of tuberculosis include cycloserine (4-amino-iso-oxazolidin-3-one), iproniazid (Marsilid), cyanoacetohydrazide (Reazide) and the various preparations of p-aminosalicylic acid and isoniazid.

**VIONACTANE.**—*Chemistry:* A mixture of the sulphate and pantothenate of viomycin, an antibiotic derived from *Streptomyces puniceus*. That antibiotic has a powerful antitubercular action, but owing to its potential toxicity and irritant effects its use had been restricted to the treatment of patients who cannot tolerate streptomycin, or those in whom the causative organisms have become resistant to that antibiotic. Viomycin sulphate is the salt usually employed, and disturbances of renal function, allergic reactions and oedema have followed its use. Recent work has shown that, whilst a mixture of viomycin pantothenate and sulphate may cause side-effects qualitatively similar to those of the sulphate alone, those reactions are far less frequent and severe. The mixed product is better tolerated generally, both locally and systemically. Viocin (Pfizer) and Viomycin (P.D. & Co.) are preparations of viomycin sulphate.

# ALUMINIUM



# IN PACKAGING

E. ELLIOTT, A.MET., F.I.M.

**D**URING the past decade, production capacity for aluminium has increased to such an extent that the metal is now second only to iron and steel in world output, and further expansion is still taking place. Packaging is one of the most important uses of aluminium; during 1957 more than 30,000 tons of the metal went to the packaging industry in the United Kingdom, and that field of application is a rapidly developing one.

### Materials

Aluminium is supplied in many wrought and cast forms, but for packaging uses by far the most important forms are rolled products, principally sheet, strip and foil. Reference to aluminium sheet and strip in the packaging industry, according to B.S. 1133, "Packaging Code," is taken to mean either the commercial purity metal (designated as S1C) or the aluminium-1½ per cent. manganese alloy (NS3), both materials being covered by B.S. 1470 "Wrought Aluminium and Aluminium Alloys: Sheet and Strip." Those materials have very similar characteristics—the aluminium-manganese alloy being slightly the stronger—and both are available fully soft or in a series of tempers, from which choice is made according to strength and formability required. For even greater strength, the aluminium-2½ per cent. magnesium alloy (NS4) is available, but its packaging applications are at present limited.

The most important form of aluminium in packaging is foil, which is usually defined as rolled material not more than 0·15 mm. (0·006 in.) thick. Foil is most commonly of commercial purity aluminium, used in the soft condition to give dead-folding characteristics (i.e., when folded the foil remains as set). While foil is often used alone as a wrapping material, or coated with suitable protective and decorative lacquers, it is also available laminated to many other packaging media such as cellulose films, papers, parchment, cardboard and the like.

Containers made by impact extrusion are principally in pure aluminium: rigid cans usually of aluminium of 99·5 per cent. purity, and collapsible tubes in aluminium of 99·7 per cent. purity.

Aluminium has only one-third the density of steel, and that must be borne in mind in assessing the area of foil or sheet provided by a certain weight. The metal's strength, ductility and resistance to shock are

high, so that containers of adequate robustness are light in comparison with those of more traditional materials such as tinplate or glass, which can mean important savings in transport costs. On account of its ready formability, aluminium may be made into containers of all types by shallow drawing, deep drawing, lock-seaming, or impact extrusion. Lock-seaming may be used to give any of the general purpose three-piece containers familiar throughout the packaging industry, and seams are readily sealed with suitable rubber or plastics compounds. Deep drawing produces cylindrical containers with a height-diameter ratio of over 0·6:1, while flatter cans (cylindrical or rectangular) may be made by shallow drawing. In impact extrusion, a small disc or slug of aluminium held in a die is struck a blow with a punch, so that the metal flows back over the punch and so forms a container. Rigid containers made in that way require no further treatment other than trimming, provision of lids, and decoration; collapsible tubes must be annealed to make them fully soft. Aluminium collapsible tubes have the advantage that, by reason of the softness and ductility of the pure metal, they collapse readily and are without that tendency to return to original shape that, with some other tube materials, may cause uncontrolled expulsion of contents on subsequent pressing.

Foil containers made by drawing or crimping are now familiar, and the capacity of foil to mould to the shape of its contents is a result of its dead-folding characteristics.

The appearance of aluminium is attractive. Rolled or impact-extruded products have a mirror-like, reflective surface that is pleasing and little affected by shelf exposure. Unsightly rust-staining cannot take place to spoil appearance or applied finishes, or to mar labels. All aluminium surfaces

have upon them a strongly adherent, impervious, transparent film of oxide, which protects the metal against attack by the atmosphere or by many food and chemical products. Most neutral or near-neutral substances do not attack aluminium, and many acids are also without effect. However, it is essential when considering the metal as a packaging medium to seek expert advice as to its suitability for contact with the material concerned.

To prevent attack upon aluminium by substances that are normally unsuitable for contact with it, two approaches are possible. The addition of a small proportion of a



Dubarry Perfumery Co., Ltd., Hove, Sussex, switched over to wrapping their bath cubes for home and export markets in aluminium foil. Supplied in a range of six colours by Venesta, Ltd., the 0·009 mm. wax-backed foil provides complete protection and eye-catching colour appeal at the point of sale. Here two operators supervise the wrapping and labelling of tablets by a fully automatic machine.



At left: A variety of impact-extruded aluminium aerosol containers; at right: Impact-extruded collapsible aluminium tubes.

harmless chemical to the material to be packed may render it innocuous. That is an application of the principle of inhibition, a well-known example of which is the adjustment of the composition of tooth-pastes, the great majority of which are packed in uncoated aluminium collapsible tubes. The other approach is by the use of protective finishes, and here it is convenient to consider (a) those which are also decorative, and (b) those which may be applied solely to enhance appearance. Lacquers and waxes are the most popular protective finishes; they are applied to sheet and foil by roller coating and to the inside of containers by spraying, sometimes followed by stoving.

To improve appearance many finishes may be used. Mechanical treatments include embossing (suitable for foil or sheet) and polishing or scratch-brushing, which may be applied to containers either generally or locally. Overall lacquering in colour is used with foil, and printing may be applied by all the conventional techniques. Opaque finish may be combined with transparent coloured coatings, the latter being particularly brilliant from the lustre of the metal shining through them.

Mention must be made of a finish that is unique to aluminium, namely anodising. That is an electrochemical thickening of the oxide film on the metal, the resultant coating being highly protective, and easily dyed for decoration. Aluminium of high purity, or suitable alloys based upon it may be brightened by chemical or electrochemical means, and subsequently anodised, and if necessary dyed, to give highly



Top: A shallow-drawn container for May & Baker's Promicrol developer. At left: Aluminium foil wrapping used for suppositories and tablets.



reflective and most attractive effects to the containers. Lacquers are applied to aluminium, principally foil, to confer heat-sealing properties, so that packs may be closed and rendered air-tight by the local application of heat. Adhesives used to attach aluminium to other packaging materials must be of suitable composition. The pH value should be between 7 and 9, and the presence in the adhesive of borax and sodium silicate is advantageous when one of the components has an acid reaction. Adhesives should not contain chloride in excess of 0.1 per cent. and, if water-soluble sulphate is present, the glue should be tested before application. Thermoplastic adhesives such as paraffin or microcrystalline waxes and bitumen are without action on the metal.

Aluminium sheet and strip provide a complete barrier to the passage of liquids, gases and bacteria. The degree of permeability of foil to water vapour depends upon its thickness, since the thinnest foils inevitably contain perforations. At 0.001 in., perforations are few, so that water-vapour transfer is negligible. Even through the thinnest foils commonly used in packaging, moisture passes extremely slowly, so that the contents of a pack are maintained moist or dry virtually as originally wrapped. Aluminium is a complete barrier to light.

Aluminium is also completely suitable for contact with foods or other materials taken orally. It is entirely non-toxic, non-absorbent, non-perishable and has no taste or smell. It is a complete barrier to bacteria, and does not support their growth. The metal cannot impart colour, flavour or smell to consumable products packed in it.

### Applications

Impact-extruded aluminium cylindrical containers are popular for pharmaceutical, horticultural and photographic products. They usually have screwed lids, and are decorated, instructions for use being easily incorporated as part of the decoration. The wide range of possible sizes makes them ideal for the packaging of pills, powders, films, tablets, capsules and many similar products, with the obvious advantages of attractive appearance, lightness, rigidity and strength. They are of course unbreakable.

Another popular decorated container is the box made by shallow drawing. It may have a slip or hinged lid, and has the advantage of being handy in shape for the pocket. Rectangular boxes of that type are used for pills, lozenges and similar pharmaceutical products, and also for plasters and bandages, while boxes of the circular variety contain beauty preparations, creams, solid dentifrices, etc.

Special reference must be made to tubular containers for the packaging of such products as lipsticks and solid Colognes. As already mentioned, such containers may be

made from alloys based on high-purity aluminium brightened, anodised and dyed to give a luxury finish that will be maintained indefinitely.

The tremendous post-war increase in the use of collapsible tubes is well known; it may not, however, be realised that over 60 per cent. of such containers are now in aluminium. In the chemist's shop collapsible tubes are ubiquitous; they contain tooth-pastes, vanishing creams, ointments, brilliantines, hair creams, hair dyes, suntan creams, shaving creams, depilatories, etc. They are also used for veterinary preparations such as intramammary injection creams.

Aluminium aerosol containers are produced by impact extrusion and so, in addition to being light and strong, they have the advantage of good appearance through the absence of a side seam. The natural aluminium colour of the shoulders of the containers contrasts pleasantly with the lacquered finishes applied to the curved surfaces, and the attractive appearance is completed by the many varieties of cap used to cover and safeguard the valve.

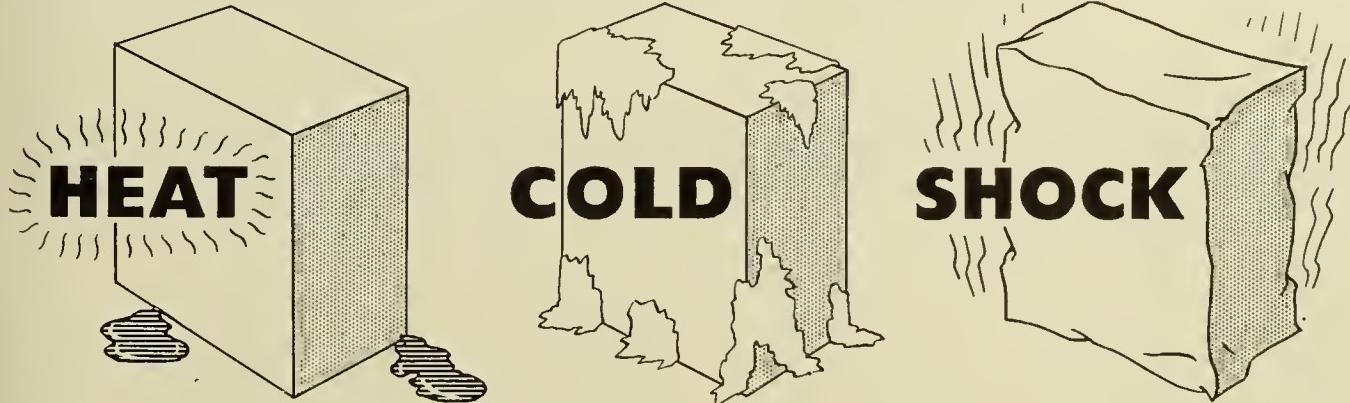
Many pharmaceutical products are wrapped in foil or foil laminates and it would be difficult to deal with them fully here. A recent interesting development is the wrap-

ping of toilet soap in foil. The laminate used for that purpose includes an adhesive based on sodium silicate, and the improved appearance of toilet soaps wrapped in that way has been taken advantage of by a number of producers. Other materials wrapped in foil include shaving soap, bath cubes and shampoos. For general wrapping purposes foil of 0.009 or 0.012 mm. thickness is adequate.

Foil of 0.3 mm. thickness, coated with a heat-seal compound, is used for the packaging of pills individually. That thickness of foil is necessary to obtain freedom from perforations. To protect the pills from contact with moisture vapour the pack is heat-sealed, and that also enables the user to tear off one pill at a time without disturbing the protection given to the others. Laminates of foil with film may also be used for the packaging in sachets of semi-liquid materials such as shampoos.

This survey of the packaging uses of aluminium is of necessity short, and much relevant information is therefore not included. It is, however, readily available from the manufacturers of aluminium and its alloys in semi-fabricated form, or from the Aluminium Development Association, 33 Grosvenor Street, London, W.1.

## Testing packages for resistance to . . .



F. A. PAINE, B.Sc., F.R.I.C.

**T**HE range of packages and packaging material used for pharmaceutical products is wide, but whatever type of package is required it must provide a high standard of protection for the product. Consequently adequate testing of the packaging is essential before a new product is placed on the market.

Two broad groups of pharmaceutical products may be distinguished according to the nature of the packaging required. First, preparations that require essentially functional packaging because they are normally supplied only to or through the medical and pharmaceutical professions without advertisement to the lay public; and secondly, proprietary medicines, etc., sold direct to the general public and which frequently require more or less spectacular advertising matter to be incorporated into the packaging. Both groups, in view of the considerations of health, and often life itself, are characterised by the same prime requirement of functional efficiency. Sales appeal, when needed, must be added to the package without reducing its efficiency.

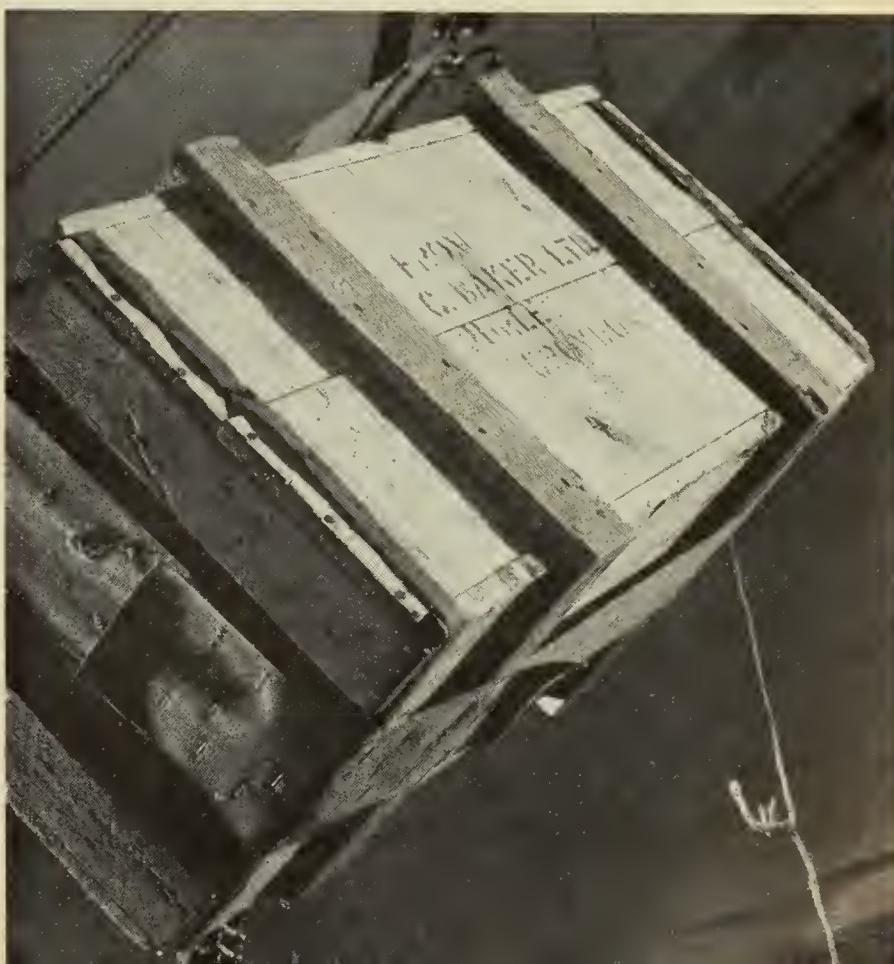
The types of test employed on any package for any product fall broadly into three classes:—

**MECHANICAL TESTING** (to prove the efficiency of the complete shipping container to travel from factory to user without breakage);

**CLIMATIC TESTING** (to ensure that the package, whether shipping container or retail unit, provides adequate protection against the vagaries of climate in all parts of the world); and,

**COMPATIBILITY TESTS** (to ascertain

whether those constituents of the package in contact with or in close proximity to the product could cause the product



**DROP TEST:** Several types of drop tester are available. The type illustrated consists of a pulley system for raising the package, to which is attached a quick-release mechanism, holding the package by means of a hook and canvas sling. The package may be held in any position for the fall and dropped on to a standard floor (usually concrete or steel).



**INCLINED PLANE IMPACT TESTER** (above): Originally devised by the Container Freight Bureau of the American Association of Railroads, the test produces controlled impacts on the various faces or edges of a package. It consists of an incline on which a "dolly" runs. The speed of the "dolly" at impact can be varied up to about 8 m.p.h. according to the distance from which it is released. At the bottom of the plane a heavily braced bumper of wood is placed at right angles to the track. The package, the leading edge of which is level with the leading edge of the "dolly," is suddenly brought to rest in impact in a similar way to that experienced in shunting and other side impacts.

**THE VIBRATION TESTER** (at right above): The tester is standardised by the National Safe Transit Committee in the United States. It consists of a table that can be vibrated with a frequency of between 120 and 300 cycles per minute with an amplitude of one inch. The packages placed on the table are lifted and dropped by that action and behave in a manner similar to that experienced during transport by road or rail. Arrangements can be made for testing to be carried out in stacks to simulate the loading effect on stacked goods in transit.

to deteriorate under any likely conditions of transport or storage during the marketing operations).

Two sets of questions must therefore be answered before any package can be devised and tested: How can the product be damaged or deteriorated?; and what are the hazards (climatic and mechanical) that the package may meet during the marketing operations? Both the type of package required and the methods of testing used are dependent on the answers to those questions.

Given the data, the package testing laboratory can simulate (under controlled conditions in the laboratory), a sequence of events approximating to those the package is to meet on its journeys between manufacturer and user. Since it is often as misguided to spend more money than is necessary to provide adequate protection to the contents as not to spend enough, it is important to base the assessment of journey hazards on the normally expected treatment, adding a reasonable safety margin according to the type and value of the product concerned.



### Testing the Package

Testing the package for climatic resistance and compatibility are best considered together, since in most instances the compatibility of a product with the package material with which it is in contact or in close proximity is dependent on the temperature and humidity of the surrounding atmosphere. For example, many proprietary products contain in tablet form mixtures of two or more drugs which, while quite compatible with one another for long periods at a low moisture content, react together causing deterioration if dampness from the surrounding atmosphere raises the moisture content of the tablets above a critical value.

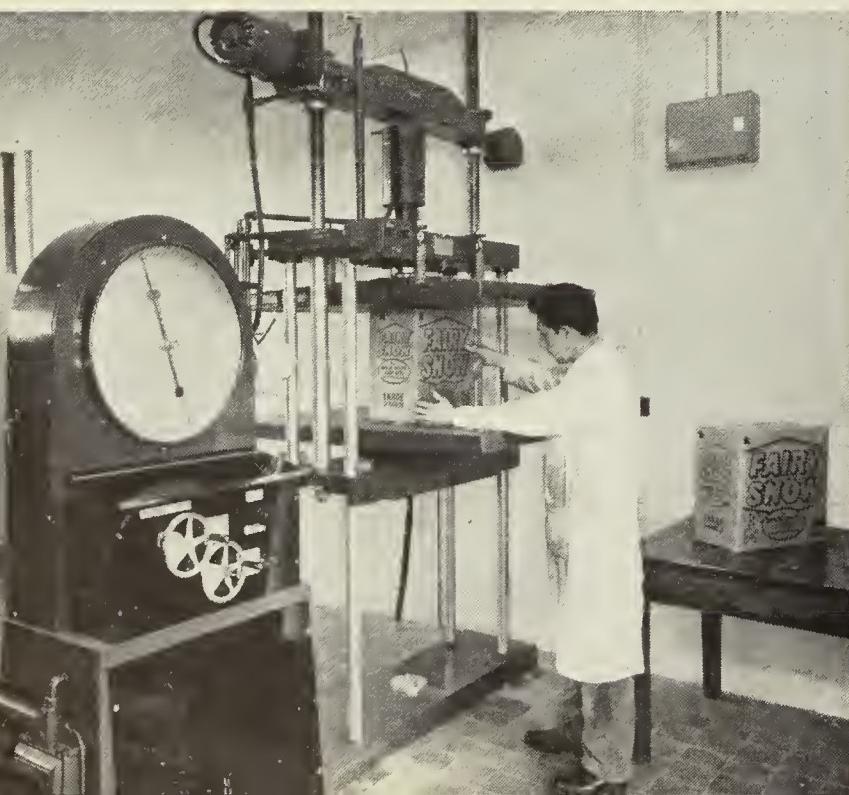
That kind of test is normally carried out by placing packages filled with the product in rooms or cabinets that maintain the desired climatic conditions for an appropriate period. Different types of cabinets provide temperature and humidity conditions similar to those encountered anywhere on the surface of the globe, and tests are available not only to study daily variations in temperature and humidity, but also, when light can have a deteriorating effect, to provide for periods of exposure to simulated sunlight.

For a new product, testing must be comprehensive and complete, but after a suitable package has been evaluated fewer "control" tests are needed to ensure that the standard is maintained.

Before dealing with the types of test available for evaluating the mechanical performance of a package it is important to stress that such tests must, if needed, be carried out in conjunction with climatic tests. The mechanical behaviour of a container made from paperboard, for example, may be considerably different in a tropical climate from its behaviour in temperate conditions. Those plastics which can become very brittle at low temperatures: nailed wooden boxes, which shrink or swell in dry or wet climates; metal containers that have become corroded, withstand mechanical testing according to their condition, and testing a new container can give misleading information.

Conversely the protection provided against climatic hazards is also dependent on the mechanical condition of the package. There again, climatic tests must be used in conjunction with mechanical ones or misleading results may be obtained. The main mechanical hazards of transport are drops and impacts, vibration and compression.

(Some of the photographs with which the article is illustrated are reproduced by courtesy of the Printing, Packaging and Allied Trades Research Association.)



**COMPRESSION TESTER:** The compression test is used to estimate the safe stacking height of non-rigid packages such as fibre drums, fibreboard cases, light timber crates, etc. The load is applied hydraulically and recorded on the dial gauge and a chart, the maximum value sustained before failure being used in estimating the safe load in stacks.



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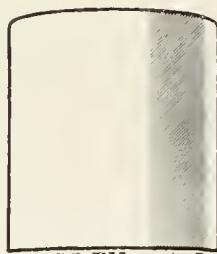
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C	6 doz.	<b>12</b>			Prompt
D	4 doz.	<b>8</b>	2 doz.	<b>4</b>	Prompt
E	2 doz.	<b>4</b>	4 doz.	<b>8</b>	Prompt
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# Advances in

## **LABELLING**



FREDERICK T. DAY

THE wide variety of products handled by chemists demands that serious consideration should be given to processes of labelling, branding and sealing the article or packaged product. The many new forms of laminates, aluminium foils, metal-lined wrappings, cellulose films, plastics, varnished and lacquered surfaces used in the packaging of products and in their current forms of presentation for sale has led to striking developments in labelling and sealing.

Today, packaging is considered as part of the process of manufacture. Packaging that appeals to the eye encourages the retailer to give longer and more frequent display to the product. The well-labelled product influences customer-selection in its favour—the retailer or his assistant completing the final sale. Packaging and labelling go far beyond their original purpose, which was that of merely protecting and identifying the product. Today they have an additional function, that of the "silent salesman."

The various forms of product labelling are here discussed along with their respective merits and with notes on the relationship between the product, the surface to which the labels are applied, and the function of the labelling.

### Five Main Forms of Labelling

In product packaging such materials as paper, viscose filmic cellulose wrappings, glass, metal, plain and lacquered tin, plastics, leather, wood, ebonite, varnished and cellulose finished surfaces are all employed either in the make-up of the product or the packaging itself. Today there are an adhesive medium and a method of application to every known surface, and, for unit or product labelling (ignoring bulk packing), there are five main forms:—

1. The most modern form of labelling that has found particular application in pharmacy is the one now termed heat sealing or heat fixing. A basic paper is coated with a thermoplastic synthetic resin and is applied by a combination of heat and pressure. Most basic papers, metal-lined wrappings and laminates may be treated by that method. The printed label is applied by a simple hand hot iron, or hot plate, to an attachment fitted to automatic packaging machinery. There are two forms of heat-fix label paper: instant (the label, when heated, is ready for immediate application to the surface); and delayed action (the adhesive remains tacky on the label after the source of heat has been removed, so that the label may be applied to the surface in the best position). The delayed action method permits of special labelling of products of a heat-sensitive nature and of fragile items. Heat-fixed labels are clean in application and there are no wrinkles or creases because the labels lie absolutely flat. It is noteworthy that the pharmaceutical and cosmetic industries were among the first to realise the advantages of freedom from the use of liquid adhesives.

2. Pressure-sensitive labels are entirely self-adhesive and are applied by finger pressure, the adhesive coating on the label being in a state of permanent activation. They may be peeled off without leaving behind any residue and they are, therefore, ideal for price labels up to the point of sale of

the product, and for ethical pharmaceutical preparations that are to be dispensed in a container that does not identify the product to the patient. The latest form of pressure-sensitive label is called Tackyrite; it becomes attached to the surface to which it has been applied and may be removed only by a solvent. Self-adhesive labels may be considered as the most advanced form of label yet formulated.

3. Glass, metal, printed tin, plastics, etc., may be labelled by the recently produced cellulose slide-off transfer. Cellulose transfer paper may be printed by all processes and looks most attractive, particularly when printed by silk-screen process. The printed transfer label is immersed in water when the printed image is ready to apply to the surface. The labels are transparent and flexible, and may be moved into any required position. They look their best when used on bottles of liquid products, where the colour of the contents of the container may be seen through the label. Such labelled products display well under conditions of artificial lighting. The labels are excellent for perfumery, cosmetics and gift articles and packages.

4. Gummed-paper labels stick to glass, tin, leather, etc., and are applied, after moistening, by hand or by machine. New types are constantly being devised to label the more

MOISTENING OF GUMMED-PAPER LABELS



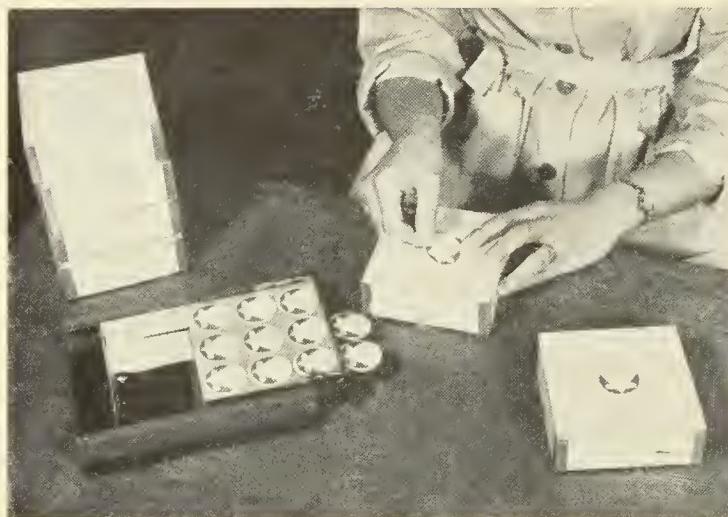
Too much



Too little



Correct amount



At left: The application of pressure-sensitive labels; at right: Heat-sealing a viscose-film pack with a "header" label.

recent materials used in modern packaging. There are gummed paper labels designed for products destined to be exported to the Middle and Far East, and which must withstand damp and heat; and at the other end of the scale, there are papers which must withstand conditions experienced in very cold climates.

5. Plain paper and liquid adhesives, in combination, are used for labelling boxes, cartons, cases and, in some instances, products, but adequate mixing, clean hands and frequent washing of equipment are essential. The right adhesive recipe must be used for the labelling operation involved, and the mixing instructions of the maker should be carefully followed.

Within each group, new recipes are constantly being introduced to meet the demands of the packager, the packer and the labelling operator.

One or two points relative to the various processes of labelling may be of assistance. In the handling of gummed labels it is important that not too much moisture should be applied to the surface of the paper. Too much moisture washes away part of the adhesive coating while, conversely, not enough moisture fails to activate the gum sufficiently. The selection of the right adhesive for the surface concerned is essential and field tests should be carried out where new surfaces are involved.

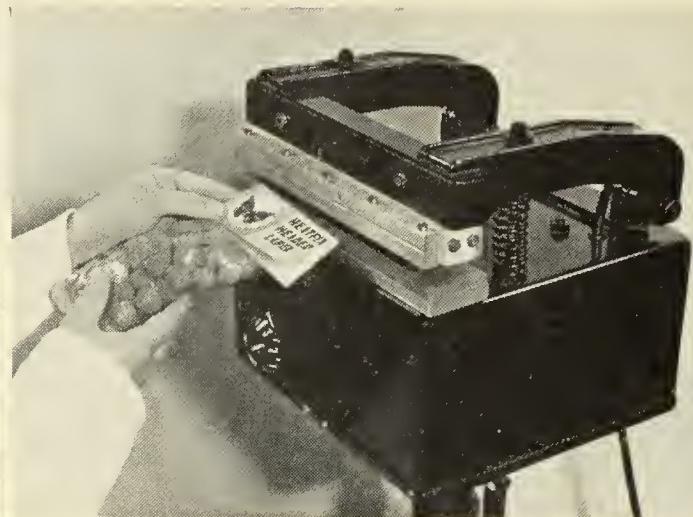
Three main factors play their part in the use of heat-seal labels: temperature or the degree of heat to which the adhesive is exposed; the time the adhesive is exposed to the heat; the pressure at which the label is applied to the article.

Those three factors are interdependent and, should one of them be changed or varied, the other two must also be changed at the same time. Grades of heat-seal labels used for tropical countries have a high melting point. The standard grade begins to block at 140° F. and is normally tacky at 180° F. The temperature of the activating plant is about 100° higher than that, the extra temperature being required to activate the coating quickly.

#### Bases for Heat-seal Labels

Heat-seal papers adhere to most transparent wrapping including rigid plastics such as polystyrene, urea formaldehyde, PVC, and also to plain and lacquered tin and metals. Suitable heat-sealing machinery is available for their application. Some cosmetic packagers have changed to heat-seal labelling of their bottles, plastic containers and powder boxes because of the immaculate cleanliness resulting from the absence of liquid adhesive.

In the make-up of dome-shaped boxes, two heated dies are used and the top label is applied at the same time as the box is domed. Time required is two seconds against fifteen when gumming is carried out with wet adhesive. There are many uses in the photographic trade. Colour transparencies can easily be mounted into a viewing folder



that has an inner mask of double-sided or wafer heat fix. The film can be held in position without coming into contact with the adhesive and there is no danger of moisture causing damage.

Of late, many chemists have re-styled their labels without loss of prestige built up by the established label. Much more re-styling could be carried out to meet contemporary design requirements and display and production needs. Label designs which follow the contour of the product or bottle look attractive and there is definite eye-appeal in the shaped label. All too often one sees so many square and



Punched-out shaped brand labels.

rectangular - shaped labels when there are so many interesting styles available from the printed label-specialist.

The design itself should not only make an appeal when seen or displayed in unit form, but should be such as to form a pleasing composition when the product is displayed in mass formation. Labels should carry a good design without too much wording. It is often the case that a picture is worth a thousand words. Colour is important and should bear some relationship to the product or its uses. Metal seals and brand labels are popular in pharmacy, but much may be done to enhance a printed label by an after-treatment of varnish or nitro-cellulose, rendering the label finger-print proof, dustproof and waterproof. Those surface treatments bring out the rich colouring of the printer's ink and give more durable and attractive labels, and the surfaces are flexible and scuff proof. The latest surface treatment perfected in recent months is the super-gloss cellulose finish that converts the ordinary label into a veritable masterpiece of polish and colour. Where both high gloss and label durability are required, some suitable surface treatment of that kind may be carried out by the label-printer specialist.

## PACKAGING NOTES

**Aerosol Stencil-ink "Dispenser."**—An aerosol ink "dispenser," "Spray," for use in the stencilling of boxes, crates, cartons, etc., is being marketed by J. & H. Rosenheim & Co., 80 York Street, Glasgow, C.2.

**Vitreous Coloured Labels.**—A 12-p. booklet illustrating the use of vitreous colour enamelling for labelling bottles has recently been published by United Glass Bottle Manufacturers, Ltd., 8 Leicester Street, London, W.C.2.

**Polythene-coated Cellulose Film.**—The uses and advantages of Polycell polythene-coated cellulose film is explained in a twelve-page booklet available from British Cellophane, Ltd., 9 Henrietta Place, London, W.1.

**Printed Polystyrene Tubes.**—Among pharmaceutical products now being packed in printed polystyrene tubes made by the plastics group of the Metal Box Co., Ltd., 37 Baker Street, London, W.1, are Ferromyn and Ferromyn B and Hypon (Calmic, Ltd.), and Fennings Little Healers. Printed polystyrene tubes are strong and light, and the printing upon them is durable. For additional sales-appeal a wide range of coloured polythene stoppers is available.

**Uses of Corrugated Paper.**—A division of Bowater-Eburite Fibre Containers, Ltd. (Croydon container division), Purley Way, Croydon, Surrey, has published a folder illustrating the uses of Bowater-Eburite single-faced corrugated paper. The uses of strawpaper rolls as layer pads and cushions, glued for corner protection, die cut, punched or scored as required are indicated. All-Kraft and Kraft-backed rolls are also obtainable, if desired, in the form of boxes, cartons and folders.

**Two New Labelling Machines.**—A new leaflet "dispenser," the Newman, has been introduced by D. Trapow & Co., Ltd., 113 Regents Park Road, London, N.W.1. The "dispenser" straddles a conveyor belt on which the product is proceeding and by a system of rubber rollers lays a leaflet on top of each flat (or near flat) article passing below it. It is adjustable for labels up to 4 x 8 in. A side-effect of the rollers is to smooth out newly applied labels. A hopper magazine holding about 600 leaflets rests on top of the friction roller. Each bottle on the conveyor belt revolves a second roller, which is in light mesh with the first roller, thus moving a leaflet forward. The bottle then passes under a third, in-

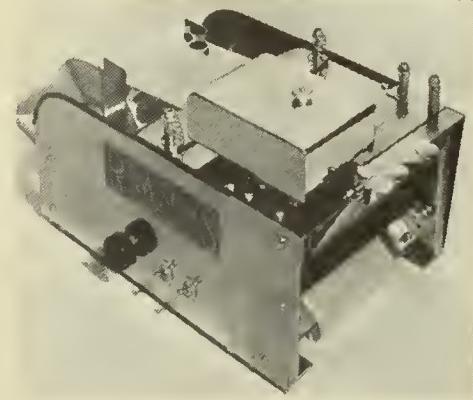
dependent roller, which rolls the leaflet on the bottle. There is no motor, the drive being transmitted from the belt to the rollers by the passing articles. A prototype of the machine is in use at Radiol Chemicals, Ltd., 78 Upper Richmond Road, London, S.W.15, and it is understood that Messrs. Radiol are prepared to demonstrate it to any interested company by arrangement. Messrs. Trapow have also recently introduced a larger version (model 4B) of their Newman bench-type automatic labelling machine for cylindrical objects. The new model accommodates items up to 2½ in. diameter for affixing labels up to 7 in. wide x 3½ in. high and is claimed suitable for handling cylindrical containers such as the smaller aerosol cans and 50-100-mil vials. Speeds of up to forty labels per minute are claimed. Without the projecting feed ramp the new model takes up about 2 ft. cube of space.

**For Label Protection.**—Claimed ideal for preserving small labels, Morane heat-sealing film is a clear transparent plastic sheet that adheres under moderate heat and pressure to all forms of paper or printed matter and many other surfaces such as wood, hardboard, metal, etc. Several grades of plastic "skin" are available, varying from 0.001 to 0.01 in. thick in the different qualities. The material is simple to apply and gives protection against dirt, oil, damp and rough handling. The surface may be cleaned by wiping with a moist cloth. A matt surface material is available on which it is possible to write. Morane is available from Morane Plastic Co., Ltd., 21 Woodthorpe Road, Ashford, Middlesex.

**Label-gumming Machines.**—Leon Davis & Co., 9 Laurence Pountney Lane, London, E.C.4, have introduced a range of label wetting or gumming machines claimed the only hand-fed types in which gum may be used. There are five models (Oyster Hade Nos. 1-5) and each may be used for either wetting or gumming the label. For use with pre-gummed labels the reservoir is filled with water, for plain labels with gum. Each machine is supplied initially with two packets of glue. In use, the label is slid under the guide and drawn across the wetting or gumming roller by hand. It is then ready for application to the container. A simple adjustable screw is provided to allow for differing label thicknesses. The No. 1 machine takes labels up to 3 in. wide, the No. 2 to 5 in., the No. 3 to 8 in., and the No. 4 to 10 in. The No. 5 machine has a split roller for labelling bottles and takes labels up to 5 in. wide.

**Pressure-sensitive Label "Dispenser."**—The Rawson Perfection label "dispenser" is designed to present pressure-

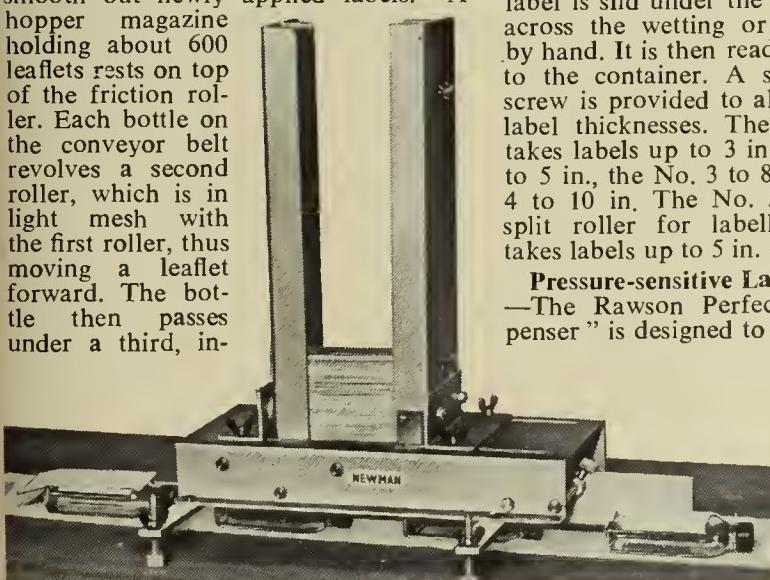
sensitive labels ready for application as fast as they can be used, operators easily maintaining, it is claimed, a speed of sixty seals per minute. The makers are Rawsons (Labelling Machines), Ltd., North Farm Road, High Brooms, Tunbridge Wells, Kent. The machine takes reels up to 6 in. wide and, when the backing sheet is passing over a slightly heated plate, the adhesive is loosened sufficiently to enable it



to be peeled away nearly completely from one row of labels. The backing sheet is drawn downwards by rollers, and the row of labels is left projecting from the machine. The operator takes the labels from right to left of the row. On receiving the last label a micro-switch causes the machine to push forward another row. The "dispenser" is electrically operated, and the amount of over-hang of the labels may be controlled by a speed-control knob.

**New Self-adhesive Labels.**—Suitable for code, batch, size and price markings, Flickon Duotone two-colour self-adhesive labels adhere to most smooth surfaces (including wood). They are claimed to withstand extremes of heat, cold and humidity, and although they cannot slip or curl they are easily peeled off when necessary. Manufactured on rolls of continuous backing strip, Flickon (plain and Duotone) labels are available in about a dozen sizes, and in rectangular shapes or circles, from the manufacturers (Speed-work Systems, Ltd., 129 Kensal Road, London, W.10).

**A Versatile Labelling Machine.**—The Bantam bench labelling machine recently introduced by Purdy Machinery Co., Ltd., 41 Prescot Street, London, E.1, is claimed to label efficiently round, flattish, square or oval shapes, even with two different shaped labels at the same time, by means of accessories or fittings that are transferable at will. A semi-automatic bench machine, the Bantam is electrically operated and, fed by a conveyor and with a conveyor take-away, it applies normal labels to as many as sixty containers per minute. More intricate labels tend to reduce output. The Bantam normally takes any label up to 3½ in. wide by 3 in. high, even in certain circumstances labels above those dimensions. With equal facility it labels all the way round articles such as vials and tubes, interchangeable parts for the purpose being supplied.



The Newman labelling machine for fitting to a conveyor belt.

**High-speed Sealing.**—Latest addition to the Butterfly range of gummed-paper "dispensers" is claimed by the makers (Samuel Jones & Co., Ltd., Camberwell, London, S.E.5) to have a 75 per cent. increase in speed over previous models. The high-speed electric "tape-shooter" has a water reservoir sufficient for a day's work—a valve maintaining the water level in the tank. A water heater ensures quicker penetration of the glued surface, and gum-strip up to 4 in. wide may be used. Two predetermined lengths of gummed paper may be set from 4 to 50 in.

**For Medical Sampling.**—Ivers-Lee (Great Britain), Ltd., Slough, Bucks, have produced for Merrell-National (Laboratories), Ltd., 20 Savile Row, London, W.1, a new pack for the sampling of tablets to the medical



profession. The new pack enables loose direction leaflets and literature to be disposed with. A perforation enables the physician to tear off the printed flap should it carry details not to be passed on to the patient. The pack is produced on automatic equipment by Messrs. Ivers-Lee, using printed acetate/Pliofilm material supplied to them on the reel by Robinson Waxed Paper Co., Ltd., Bristol.

**Polyurethane Wads.**—Cassell, Andrews & Co., Ltd., Hardman Works, Gravel Lane, Manchester, 3, are manufacturing polyurethane plastic-foam wads which they claim are suitable to take the place of cotton wool for filling tablet and pill bottles. The wads have, it is understood, been tested at the National Physical Laboratory for moisture, with negative result. The wads may be made to fit any type of container and are claimed to be labour-saving and economical.

**Self-sealing Boxes.**—C. Davidson & Sons (Packaging), Ltd., southern division, Corinthian Manor Way, Erith, Kent, draw attention to their self-sealing boxes which are assembled only at the time of use. In storage the boxes remain flat—about twenty of them taking up only as much space as one ordinary box. The boxes have adhesive already applied to the flaps which are easily and quickly sealed to form the container. They are made from stout boards that are claimed to withstand the roughest treatment when assembled. For handling large quantities (1,000—1,500 blanks an hour) a special assembling machine is available.

**Sealing Plastics by Hand.**—The Pyrobit electric-roller plastic-sealer, for welding polythene and most other plastics, is manufactured by Acru-

Electric Tool Manufacturing Co., Ltd., Chapel Street, Levenshulme, Manchester, 19. The sealer is rolled with slight pressure over the two sheets that are to be welded together, a barrier film of non-sealing cellulose film being placed between the material and the roller. The speed and pressure required are not critical, and correct results are obtained after short trial and error. Wheels and holders are chromium plated and each sealer includes three different wheels. Specially treated cellulose films may also be sealed with the Pyrobit, no barrier film being required.

**High-frequency Welding of Plastic.**—Using very high frequencies (above the 73 m/cs range) the Acme No. 2 plastic welding machine is claimed by the manufacturers (H.F. Industrial Services, Ltd., 317 High Road, Wood Green, London, N.22), to have a "phenomenal freedom from 'flash.'" Because of the use of very high frequencies the machine is claimed suitable for the welding of cellulose acetate and other rigid or unplasticised materials. It may be used for hot creasing of cellulose acetate and similar plastics without the use of high frequency, has a built-in mains filter for appliquéd work, gold and other metal-foil blocking and, although rated at 800 watts, is said to be comparable in performance with normal 1·2 kw machines. The manufacturers also state that because they have used stabilised metal rectifiers a working life in excess of fifteen years may be reasonably anticipated.

**Self-adhesive Tapes.**—GORDON & GOTCH, LTD., INDUSTRIAL SELLOTAPE DIVISION, 75 Farringdon Street, London, E.C.4, are marketing a new self-adhesive strapping tape, Sellotape reinforced binding tape, with a minimum tensile strength of 180 lb. per in. width, which needs no tensile machine or special equipment. Each inch width of tape has ninety 300-denier rayon threads laminated to vinyl film. The tape is waterproof and is supplied in a choice of five colours. JOHN GOSHERON & CO., LTD., the Packaging Tape Centre, Vauxhall, London, S.E.11, announce a new addition to their range of double-sided self-adhesive tapes—a transparent cellulose tape that has a highly tenacious adhesive mass both sides of the base material. Double-sided cellulose tape has been developed to give an extremely thin, yet strong, mounting medium where surfaces have to be joined as closely as possible. Three base materials are available—paper and cloth (in 50-yd. lengths) and cellulose (in 36-yd. lengths).—A new adhesive filament tape for heavy packaging duty is being manufactured and marketed by the MINNESOTA MINING AND MANUFACTURING CO., LTD., Wigmore Street, London, W.1. It has a tensile strength of 180 lb. per in. width. The tape, known as Scotch brand No. 880 filament tape, is similar in appearance to transparent cellulose tape "with the exception that one can just discern the thousands of parallel longitudinal rayon filaments which run through the entire length." It is available in widths of from  $\frac{1}{4}$ —1 in.

**Packaging Services.**—Companies offering comprehensive packaging and manufacturing services for pharmaceu-

tical and toilet preparations include ARTHUR H. COX & CO., LTD., Brighton, PHARMACAL SUPPLIES, LTD., Green Lane, Hounslow, Middlesex.

**Polythene Bag Sealer.**—The Hypak division of Oppenheimer Casing Co. (U.K.), Ltd., 159 Harrow Road, London, W.2, are marketing a portable machine for heat-sealing all standard gauges of polythene and cellulose films. The machine, the Hypak "Polysealer" measures only 17 x 9 $\frac{1}{4}$  x 8 $\frac{1}{2}$  in.

**Polythene Carboys.**—By improving manufacturing techniques Fibrenyle, Ltd., 157 Dukes Road, Western Avenue, London, W.3, are now producing light-weight, thin-walled polythene carboys with "even" walls. Messrs. Fibrenyle claim that their introduction has made the long-term storage and the handling and transportation of bulk liquids in polythene carboys an economic proposition. At present they are being made in three sizes (5-, 10- and 15-gall.). Where roughish handling is likely, wire cages are available for all three sizes; alternatively, an armoured metal drum with quick-release lever locking ring is available for the 5-gall. and 10-gall. sizes.

**Fifty-gall. Polythene Bin.**—Latest addition to the British-made Black Knight range of containers is a 50-gall. polythene bin with or without a pouring lip. The bin may be had in either rigid or flexible polythene, and specially designed steel holders are supplied for use when the bins are to be moved or tilted when full. The holders are cadmium plated, chromium plated or are available in stainless steel if required. A tight-fitting polythene lid is available for the non-lip type of bin for when it is being used for the transportation of liquids. The main distributors are White, Child & Beney, Ltd., Shepley Works, Audenshaw, nr. Manchester (subdistributors Tool Treatments (Chemicals), Ltd., Colliery Road, West Bromwich, Staffs).

**Aerosol Packaging.**—By a device developed jointly by SURPLICE & TOZER ENGINEERING CO., Acre Works, Windsor, Berks, and M. CALLAWAY, LTD., Saville Works, Beckenham, Kent, from an idea provided by a packaging consultant, aerosol packaging is claimed to have been brought by the Presfil pressure-filling machine "within reach of the non-specialist." A battery of three machines may be superintended by one unskilled person. Once the container has been placed beneath the filling head, all other stages of the operation—removal of air, entrainment of product and loading of propellant—follow in automatic sequence. A single Presfil machine, not much larger than an ordinary table-type television set, can turn out up to 240 pressure-filled cans or bottles an hour.—Aerosol-container filling equipment made by Arthur Colton Co., Detroit, Michigan, U.S.A., is available in Britain through GRIFFIN & GEORGE (SALES), LTD., Ealing Road, Alperton, Wembley, Middlesex. The Colton-Alpha range of standardised equipment is claimed to meet all requirements from laboratory and small-lot production operations to production filling at rates of up to 200 cans per minute.



# The CHEMIST AND DRUGGIST

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## Prices and the Public Interest

"THE public interest" is interpreted in many ways but recently the pharmaceutical industry has rather been made to feel that its activities are against most current interpretations. That is especially so when the interpretation is the one put upon the phrase by the Treasury. The Treasury's tendency to look at only one side of the account—the cost—not weighing against it the gains or advantages, is hampering, if not ham-stringing, some functions of the industry that have played an important rôle in contributing to recent advances in the medical sciences.

In the days when hospitals were mostly voluntary ones, run on limited budgets, manufacturers often supplied them with goods at less than strictly economic rates as their own way of contributing to the support the hospitals needed to solicit from all sections of the community.

With the coming of the National Health Service the whole aspect has changed. Joint contracting committees have grown up whose forms of contract, often based on local government practice, are not always applicable to the pharmaceutical industry. Not only is it claimed by the industry that many contract conditions are unsatisfactory, but also that some groups do not exercise a reasonable attitude to them. Contracts, usually for a period, are based on estimated requirements of the hospital or group yet with the contract goes no guarantee that the quantity stated will be taken up. To give an estimate without such a guarantee places the "tenderer" at an extreme disadvantage, for the hospital could, if it wished, switch to another and cheaper source even during the term of a contract. The result would be undoubted loss to the first supplier and no very substantial gain to the second, since he, too, is only getting a nibble of the full morsel.

Another type of complaint that has been raised concerns the tender for a fluid preparation in  $\frac{1}{2}$ -gall., 1-gall. and 5-gall. containers. Instead of the contract being considered for the quantity as a whole, the tender forms are dissected into prices for individual packs, with the result that one manufacturer is expected to supply the  $\frac{1}{2}$ -gall. packs, another the 1- and 5-gall. sizes. That could involve both manufacturers in financial disadvantage with neither side given any benefit from, or incentive towards, economic production.

Moreover, different buying units appear to have differing ideas on the clauses that should be included in the contracts. Surely, after the experience of ten years

of the Health Service, a simple standard form could be agreed between the Ministry of Health and the Association of British Pharmaceutical Industry that could be made applicable for all tenders for medical supplies. It would, of course, cover such essential details as quality standards, arbitration, price variation, *force majeure*, samples, etc. We feel an even greater anxiety that the overall results of the Treasury activity behind the demand for cheaper drugs will have the long-term result—disastrous in our view to the public interest—of lowering standards all round.

Much of the medical research work in this country is, as everybody knows, and as seems logical and inevitable, in the hands of the larger pharmaceutical houses. They must finance it from the goods they sell. Insistence on cheaper drugs means that, if those houses with research and development laboratories are unable to obtain a reasonable return for the everyday drugs of hospital contracts, they will abandon that field to competitors not concerned to promote research but geared to clipped margins of profit. Inevitably the research of the leading firms of the industry will, if it is to continue, have to be financed in other ways. How? They will have no choice but to concentrate on proprietary ethical preparations, especially those based on patented compounds. If they do cease to have an interest in the "ordinary" drugs and tablets it could soon come about that the hospital pharmacists may find that the standards of the products they receive are no longer comparable with those obtainable before the N.H.S. was inaugurated. That is not to argue, of course, that every lowering of price means lowering of standards. Savings resulting from production economies should—and we have no doubt will, if only for reasons of competition—be passed on.

But if the proprietary ethical preparation is thus forced to bear an even greater share of the cost of research and development work, it is apparent the Treasury officials by their one-sided interpretation of public interest, will, have caused an increase in cost of the truly "life-saving drugs" of which the Government itself is the major buyer on the public's behalf.

## Aspects of "A Complex Problem"

As was recently pointed out by Mr. J. Anderson (*C. & D.*, January 3, p. 4), the pharmaceutical industry has a most complex problem in packaging, and it is a sphere that is of necessity becoming increasingly more specialised. There has been in recent years a more scientific approach to the subject. That led, among other things, to the formation of an Institute of Packaging, which itself only recently decided to admit to membership by examination only. All packaging problems in pharmacy fall to be dealt with initially by the manufacturers, and it is a fact, again as Mr. Anderson pointed out, that most manufacturing houses have had to channel their problems through specialists, whose job it has been to keep abreast of new developments and methods. The qualities that a packaging manager in a pharmaceutical manufacturing company should have were listed in the same address: preferably a pharmaceutical background "and [he] must be part salesman, part engineer and part purchasing officer." We think he should also be something of a librarian, to keep track, by studying the various specialist journals, of the developments within his sphere. However, once

the finished product has left the manufacturer, any problems that may eventually arise with the package are bound to affect both wholesaler and stockist. It is therefore to their own advantage to try, so far as possible, to keep up with packaging developments and to apply such knowledge as they can acquire so as to ensure that packages are properly handled, and stored in the best possible conditions, in their passage to the hands of the user. Advances in packaging also affect the retailer by influencing the way in which he presents his products to the customer. To be competitive his goods must appeal to the customer through their presentation almost as much as through their quality. For that reason the retailer should also make the fullest use of the latest equipment for wrapping, sealing and labelling his products. Those considerations, with their threefold effects on manufacturer, wholesaler and retailer, are behind the special packaging feature of this issue of THE CHEMIST AND DRUGGIST.

## NEW BOOKS

### Sanitary Officers' Practice: Environmental Hygiene

EDITOR, STEWART SMITH, M.B.E. Butterworth & Co. (Publishers), Ltd., 88 Kingsway, London, W.C.2. 8½ x 5½ in. Pp. 781. 85s.

THIS volume is the fifth and final book in a series dealing with the work of the public health inspector. It has been written by a group of contributors experienced in their particular subject, and includes ventilation, water supply, environmental diseases, rodent and insect pests, atmospheric pollution, drainage, sewerage, building construction, etc., and in each case there is a useful bibliography at the end of the chapter.

### Drawings of British Plants, XII

STELLA ROSS-CRAIG, F.L.S. G. Bell & Sons, Ltd., York House, Portugal Street, London, W.C.2. 9¾ x 6 in. Plates 36.

THE drawings of Miss Ross-Craig, a member of the staff of the Royal Botanic Gardens, Kew, at once accurate, sensitively sketched and artistically arranged on the page, are a delight to botanists everywhere. The current volume, labelled "Umbelliferae (1)" is presumably to be followed by one or more on other members of the Natural Order. It includes hemlock, wild celery, caraway, parsley, water parsnip, saxifrage and chervil, some in many varieties, among the three doz. illustrated (and, of course, indexed).

### The Changing Pattern of Distribution

NICHOLAS A. H. STACEY and AUBREY WILSON. Business Publications, Ltd., Mercury House, 109 Waterloo Road, London, S.E.1, in association with B. T. Batsford, Ltd., 4 Fitzhardinge Street, Portman Square, London, W.1. 8½ x 5½ in. Pp. 380. 45s.

THE authors have examined the development of the various methods whereby goods are distributed, the changes currently taking place and their causes. Although some pharmaceutical aspects are considered, the book is concerned with distribution generally; none the less, those who are interested in such problems will find useful information therein and some new viewpoints.

### Organic Chemistry, Volume I

I. L. FINAR, B.Sc., PH.D.(LOND.), A.R.I.C. Longmans, Green & Co., Ltd., 6 Clifford Street, London, W.1. 9¾ x 6 in. Pp. x + 822. Third edition. 45s.

THE new edition of this work confirms the change of title introduced in the 1956 fourth impression with the object of avoiding confusion with volume II (upon stereochemistry and natural product chemistry). Additional sections deal with isotopes; molecular diagrams and "crowding"; inclusion complexes; ferrocene; cycloalkynes; paracyclophanes; conformation, etc. A number of previously included subjects have been expanded and rewritten. The author differentiates between fundamental chemistry and natural-product chemistry (the application of principles) and gives an early place in the book to molecular orbital theory.

## Onward from Galen A CURRENT CAUSERIE

VEL, whose cartoons illustrating incidents in a pharmacy, have delighted many C. & D. readers, and who in private life is Miss V. E. Lewis, F.P.S., Hitchin, Herts., has had an oil painting, "The Green Carboy," hung at the recently held 1959 International Amateur Art Exhibition at the Heatherly School of Fine Art, London, S.W.1. Miss Lewis's painting shows a green carboy in its traditional setting above the window of a pharmacy, and it is not difficult to recognise in the picture a packet of Bemax, three cartons of Glucodin and three of Farex on display near the carboy, though, of course, the names of the products do not appear. In congratulating Miss Lewis we add the hope that she will continue working in oils—so long as it does not interfere with her activities as a cartoonist!



ONE hundred years have passed since cocaine was isolated, almost fortuitously. Carl von Scherzer, the Austrian naturalist, had accompanied the frigate "Novara" on an expedition to South America. He brought back from Peru sun-dried leaves of the coca plant, sending them to Friedrich Wöhler's chemical laboratory at Göttingen. It so happened that one of Wöhler's assistants, the recently qualified apothecary Albert Niemann, was looking for a subject for his inaugural thesis, and eagerly availed himself of the opportunity to study the specimens. He exhausted the leaves with 85 per cent. alcohol containing one-fiftieth of sulphuric acid, treated the percolate with milk of lime, filtered it, added acid to the filtrate, and distilled off the alcohol. Left with a syrupy mass from which the resin and water were separated, he precipitated the residue with sodium carbonate and vigorously shook the deposit with ether. The ethereal solution was allowed to evaporate, leaving crystals behind. Niemann realised that he had isolated the active principle of coca, which he called "cocaine" and to which he gave the formula  $C_{22}H_{20}NO_8$ . He stated that it "benumbs the nerves of the tongue, depriving it of feeling and taste." His thesis *Ueber eine neue organische Base in den Coca-blättern* was published in 1860 (Göttingen: E. A. Huth). Niemann died in the following year at the early age of twenty-seven. A copper-plate print in the Bibliothèque Nationale, Paris, depicts him as a serious-looking man with long hair and a full beard. After Niemann's death another of Wöhler's assistants, the young chemist Wilhelm Lossen, established the formula for cocaine as  $C_{17}H_{21}NO_4$  and isolated ecgonine.

### FIFTY YEARS AGO DISPENSING OF AMPOULES

*From the C. & D., January 30, 1909*

As this convenient way of sending out sterile medicaments is becoming more and more part of the dispensing work of the pharmacist, it will not be out of place to give fuller information based on actual practice. The first ampoules were Pasteur's pipette and sterile flask, which were suggested to that great worker in the course of his researches on bacteria by a desire to obtain pure cultures by using an absolutely sterile medium, and to preserve these cultures from accidental contamination by extraneous organisms. The flask, as is now well known, was closed by a plug of sterile cotton-wool, and the long neck could be easily sealed by a flame if it were desired to remove the flask to a distance from the place of preparation. A sealed Pasteur flask is really an ampoule, for although it is usual to think of a Pasteur flask as large and to associate smallness with an ampoule, neither has, in fact, such limitations. Thirty years ago M. Limousin, a Paris pharmacist, introduced the ampoule as a convenient method of preserving hypodermics, and a paper describing ampoules was read before the Société de Thérapeutique and is published in the "Bulletin général" of the Société for April 1886. Both ampoule and its contents were sterilised in an autoclave.

# A PORTSMOUTH JUBILEE

## *Fifty years of the Portsmouth and District Chemists' Association*

L. J. CHAMBERLAIN

**I**N the early days, 1909, Mr. T. A. White, a chemist in business in Elm Grove, Southsea, issued invitations to all the other local chemists to meet at the County Club, Southsea, on the afternoon of February 3. Twenty-five chemists responded. Most of them were in business on their own account, including one each from the nearby towns of Cosham, Gosport and Fareham. It was an enthusiastic meeting, and Mr. T. H. Cruse, doyen of local pharmacists, was elected to the chair.

It is noteworthy that Mr. Cruse had already had a long and varied career in pharmacy, having opened his first business in Portsmouth in 1866, so that at the time of his election he must have been well over seventy years old.

Mr. T. Postlethwaite proposed that an association should be formed, to be called "The Portsmouth and District Pharmacists' Association" (the term "pharmacist" having come into use with the new 1908 Pharmacy Act). Mr. W. A. Bell suggested that opticians and photographic dealers should be included, but his proposal received no support.

A committee of twelve members was formed, together with four members to represent Cosham, Gosport, Fareham and Havant respectively, with Mr. T. H. Cruse as first president. The annual subscription was fixed at 10s. 6d. (5s. for members not in business on their own account) and it remained at that figure until two or three years ago, when it was raised to 15s. The original suggestion was to hold monthly meetings, but it soon appeared that that intention was more difficult to carry out than had been expected.

The first of the regular meetings was held in March 1909, and a large number of members were present. Mr. Cruse pointed out the advantages of membership, referring to the importance of agreement on such things as early closing and a weekly half-day, especially in view of the fact that many members kept their businesses open for fourteen hours a day! Mr. Postlethwaite reviewed the provisions of the 1908 Pharmacy Act, with emphasis on its effect on members.

Good support was obtained for the Association's first dinner in the autumn, and at that function it was pointed out that, out of sixty or seventy chemists in the town, only about one-third were members of the Pharmaceutical Society. When Mr. R. A. Cripps, F.I.C., addressed the Association on the Food and Drugs Act he gave many examples of faulty samples being taken, and the great progress that has been made in the fifty years of the Association's life is evident in the standard of drugs supplied.

In the spring of the following year one of the Association's members (Mr. F. Gall) gave an illustrated address on the flora of the district, and it is a matter for speculation how many of the fifty or sixty specimens he described and showed could now be found, in view of the great increase in the size of the town since then.

### *First Annual Meeting*

At the Association's first annual meeting in 1910 it was found that there was a surplus in the funds, and a donation of £2 2s. was made to the Society's Benevolent Fund. From then on the Association has always shown its interest in the Society's charities by financial support, its contribution rising to £100 in 1958. The new president elected at the annual meeting, was Mr. T. A. White, who had initiated the Association, and was later to become a member of Council.

A visit by the Association to the Municipal College, now the College of Technology, proved to be of much interest and also importance, in view of what finally came of it. Members and their wives were conducted over the premises by the vice-principal (Dr. F. Beddoe) and his staff, and were afterwards entertained to tea. Dr. Beddoe then gave a talk on the apprenticeship position, and suggested among

other things that part-time classes for pharmaceutical apprentices and students should be held separately from others, the existing mixed classes having proved unsatisfactory. Some of the members present deplored the low standard of many of the candidates for the profession, and the gathering as a whole appreciated Dr. Beddoe's suggestions.

With the coming of the National Health Insurance Act in 1911 the Association sent a deputation of four to wait on Lord Charles Beresford, the then senior Member of Parliament for the town, seeking from him an assurance that all dispensing of medicine should be reserved to the pharmacist. When Mr. White (the president) said he did not know all about the Act, Lord Charles replied that nobody did, not even the proposers! He heard all they had to say, and made what were referred to as "many typical comments." Seeing that he had a caustic wit and a very naval tongue one wonders just what those comments were!

### *Pharmaceutical Conference*

In 1911 the British Pharmaceutical Conference was invited to Portsmouth, the Association acting as hosts and making the detailed local arrangements. A member of the Association, Councillor F. G. Foster, welcomed the Conference at the Municipal College, as chairman of the Higher Education Committee, and in his remarks considered that the outlook for pharmacy was indeed black, owing to the coming of the N.H.I. Act and the setting-up of school clinics! It may be recalled here that many of the advances in education in Portsmouth, both general and pharmaceutical, were inspired by that pharmacist, later to become mayor, alderman and a freeman of the city.

Some of the first classes in *materia medica* at the College were conducted by members of the Association, and when the first full-time course for the Chemist and Druggist Qualifying examination was commenced in 1919, four members offered (anonymously) two silver and two bronze medals for ex-Service students; a year or two later two book prizes were given, and ever since then the Association has presented at least one book prize a year. Continuing its interest in the subject, the Association was active in getting the regular part-time classes for apprentices formed in the later 1920's, and how well some of the present members recall those classes!

When the Branch of the Pharmaceutical Society was first formed in 1922, Mr. A. B. Sparrow was president of the Association, and he became first chairman of the Branch. From then until 1949 the two bodies ran more or less as one, with the same officers and committee, but with a non-retail chairman in that year (Mr. N. Francis, lecturer in Pharmaceutics at the College, to whom many present members of the Association owe a great deal) they separated, with new life to each, and of course with different officers. 1951 saw the presentation of the president's badge and collar, given by Mrs. Davies Lewis in memory of her husband, who had been a staunch supporter of the Association, and Mr. T. O. Barlow (a founder-member and past-president) invested the president (Mr. F. H. Ruoff).

Although the National Pharmaceutical Union Branch has taken over some of the Association's business activities, the Association nevertheless continues to keep a watchful eye on such matters as profit margins, competitive trading, etc.; it holds at least one business meeting a year. In recent years the Association has organised staff outings and formed a car-club, with runs for picnics and/or treasure hunts, and those social activities bring members more closely together.

The Portsmouth and District Chemists' Association enters its Golden Jubilee year with great hopes for the future of private pharmacy, which has always been its main interest.

## GUIDE TO NEW MEDICAMENTS

Information about proprietary products supplied principally on prescription. Reprints on perforated gummed paper for affixing to index cards are obtainable from the Editor. Notes on the products are given on p. 142.

THE CHEMIST AND DRUGGIST Guide to New Medicaments, February 7, 1959

### VIONACTANE

**MANUFACTURER:** CIBA Laboratories, Ltd., Horsham, Sussex.  
**DESCRIPTION:** A mixture of viomycin panthenate/sulphate equivalent to 1 gm. of viomycin base.  
**INDICATIONS:** In the treatment of pulmonary and extrapulmonary tuberculosis, particularly in patients with bacterial resistance to streptomycin.  
**DOSAGE:** Each vial should be diluted with 5 mils of water for intramuscular injection. Single doses of 1-2 gm. should be given 2-3 times a week. Children should be given a dose of 30-50 mgm. per kilo of body weight.

**HOW PACKED:** In rubber-capped vial containing the equivalent of 1 gm. of viomycin base as a mixture of the panthenate and sulphate.

**FIRST ISSUED:** February 1959.

THE CHEMIST AND DRUGGIST Guide to New Medicaments, February 7, 1959

### HEXOPAL

**MANUFACTURER:** Bayer Products, Ltd., Neville House, Edcn Street, Kingston-on-Thames.  
**DESCRIPTION:** A new long-acting peripheral vasodilator, having the advantage of a very low incidence of side-effects. Tablets each containing 200 mgm. of meso-inositol hexanicotinate.  
**INDICATIONS:** Primary and secondary Raynaud's phenomenon and Raynaud's disease; acrocyanosis; chilblains; Buerger's disease; night cramps and "restless legs" syndrome. It is also worthy of trial in migraine, and intermittent claudication.

**DOSAGE:** Depends on response to treatment. Initially two tablets three times a day is recommended. Maintenance: The low incidence of side-effects allows dosage to be increased to as much as 16-20 tablets daily, where necessary; for night cramps and "restless legs" 1-3 tablets may be given at night.

**HOW SUPPLIED:** In containers of forty and 250, 200 mgm. tablets.

**FIRST ISSUED:** January 1959.

**REFERENCES:** *Särtryck ur Svenska Läkartidningen*, 1958, 55, 1, No. 1. *Svensk Läkartidning*, 1958, 48, 3453. *Minerva Med.*, 1951, 1, 1117.

THE CHEMIST AND DRUGGIST Guide to New Medicaments, February 7, 1959

### Influenza virus polyvalent vaccine

**MANUFACTURER:** Pfizer, Ltd., 137 Sandgate Road, Folkestone, Kent.  
**DESCRIPTION:** Influenza virus vaccine, polyvalent, refined and concentrated, consists of the influenza virus types A and B, propagated in the extraembryonic fluids of the developing chick embryo. The virus is rendered inactive by treatment with formalin. Thimerosal in 1:10,000 concentration is used as a preservative. Standardised to contain 500 total CCA units per mil (not less than 12,500 haemagglutination units per mil).

**INDICATIONS:** Immunisation against influenza.

**DOSAGE:** *Adults:* Two doses of 1 mil each subcutaneously, the second at least two weeks after the first. Two injections are needed to achieve good antibody response in people without previous exposure to the antigens; one may be sufficient for those partially immunised by a previous infection. For adults who receive a complete course of influenza injections, a boosting dose should not exceed 0.5 mil within six months.  
*Children:* Proportionally smaller doses should be used.

**HOW SUPPLIED:** In 5-mil multidose vial.

**FIRST ISSUED:** January 1959.

**SUPPLY RESTRICTIONS:** Therapeutic Substances Act.

**NOTES:** Since the vaccine is prepared from hens eggs, its administration is contraindicated in individuals with a history of hypersensitivity to egg or chicken protein. To be stored at 2°-10° C. and shaken well before use.

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### ALCOS-ANAL suppositories and ointment

**MANUFACTURER:** Camden Chemical Co., Ltd., 61 Gray's Inn Road, London, W.C.1.

**DESCRIPTION:** Suppositories containing: Sodium salts of fatty acids of cold cleared cod-liver oil, 11 per cent.; benzocaine, 5 per cent.; and chlorothymol, 0.035 per cent.; and an ointment containing: Sodium salts of fatty acids of cold cleared cod-liver oil, 11 per cent.; polyethylene glycol-monododecyl ether, 5 per cent.; chlorothymol, 0.1 per cent.

**INDICATIONS:** Internal and external haemorrhoids; haemorrhoids in pregnancy; pruritus ani; in surgical cases the ointment may be used to promote relief until an operation becomes convenient, as well as in the intervening period between injections; and the relief of symptoms after prolapse operations.

**METHOD OF USE:** After preliminary cleansing upon each occasion, a suppository is used at night and in the morning and after defaecation. The ointment is applied via the applicator. Treatment should be continued for at least four weeks.

**HOW SUPPLIED:** In applicator tube of 20 gm. (approx.) of ointment. In boxes of ten and 100 suppositories.

**FIRST ISSUED:** January 1959.

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### VARIDASE buccal tablets

**MANUFACTURER:** Lederle Laboratories division, Cyanamid of Great Britain, Ltd., Bush House, Aldwych, London, W.C.2.

**DESCRIPTION:** Buccal tablets each containing 10,000 units of streptokinase and at least 2,500 units of streptodornase.

**INDICATIONS:** The management of inflammation and oedema associated with trauma or infection, thrombophlebitis, cellulitis, abscesses, sinusitis, uveitis, hematoma, leg ulcer, chronic bronchitis and chronic bronchiectasis. Also indicated adjacently for control of oedema in certain dental conditions such as extractions involving excessive trauma.

**DOSAGE:** 1 tablet four times daily for a minimum of three days. Tablets should be placed in the buccal sulcus and allowed to dissolve slowly. The patient should swallow as little as possible to permit maximum absorption. The enzymes are inactivated by gastric juice and therapy will fail if the tablet is swallowed. In chronic cases, such as chronic bronchiectasis, the dose should be increased to two tablets four times daily for several weeks or until the desired effect is obtained.

**HOW SUPPLIED:** In bottle of twelve tablets.

**FIRST ISSUED:** January 1959.

**NOTES:** Where infection is present or suspected, simultaneous administration of a broad-spectrum antibiotic is mandatory.

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### IVAX

**MANUFACTURER:** Boots Pure Drug Co., Ltd., Station Street, Nottingham.

**DESCRIPTION:** A pleasantly-flavoured preparation for treating diarrhoeas. Each fl. oz. contains neomycin sulphate 300 mgm., sulphaguanidine 4 gm., light kaolin 6 gm. in a pleasantly-flavoured vehicle. This preparation does not require reconstitution before use and is stable ready for use.

**INDICATIONS:** Diarrhoeas, specific and non-specific, including: Bacillary dysentery; infantile diarrhoea; food-poisoning; "summer diarrhoea," etc.

**DOSAGE:** *Adults and children (over 12 years old):* 2 tablespoonfuls initially followed by 1 tablespoonful 4 times daily. *Children (6-12 years):* 1 tablespoonful initially, followed by 2 teaspoonfuls 4 times daily. *Infants and Children (under 6 years):* 1-2 teaspoonfuls initially, followed by  $\frac{1}{2}$ -1 teaspoonful 4 times daily.

**HOW SUPPLIED:** In bottle of 6 fl. oz.

**FIRST ISSUED:** January 1959.

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**ALKA-DONNA-P**

MANUFACTURER: Carlton Laboratories (Southern), Ltd., 2 Norfolk Square, Brighton, Sussex.

DESCRIPTION: Tablets, each containing magnesium trisilicate, gr. 7½; aluminium hydroxide, gr. 4; extract belladonna, gr. ¼; phenobarbitone, gr. ¼.

INDICATIONS: For the treatment of peptic ulcer and hyperacidity when control of spasm and slight sedation is required.

DOSAGE: 1-2 tablets to be sucked, every three to four hours. Not more than 18 tablets in twenty-four hours.

HOW SUPPLIED: In tube of ten, bottle of sixty and box of 350 tablets.

FIRST ISSUED: December 1958.

SUPPLY RESTRICTIONS: S4.

NOTES: Tablets embossed with letter S.

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**ALKA-SCORB**

MANUFACTURER: Carlton Laboratories (Southern), Ltd., 2 Norfolk Square, Brighton, Sussex.

DESCRIPTION: Tablets, each containing: Magnesium trisilicate, gr. 7½; aluminium hydroxide, gr. 4; ascorbic acid, 10 mgm.

INDICATIONS: For the treatment of gastric and duodenal ulcers; hyperacidity; and for premedication in cases requiring surgical intervention.

DOSAGE: Two to three tablets as required.

HOW SUPPLIED: In tube of ten, bottle of sixty and box of 350 tablets.

FIRST ISSUED: December 1958.

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**THORPAX syrup**

MANUFACTURER: Imperial Chemical Industries, Ltd., pharmaceuticals division, Wilmslow, Ches.

DESCRIPTION: A new, quick-acting antitussive for the rapid relief of exhausting and unproductive coughs. Each teaspoonful (3·5 mils) contains 25 mgm. of dimethoxanate hydrochloride and 1·25 mgm. of Nilergex (isothipendyl hydrochloride) in a pleasant-tasting syrup.

INDICATIONS: Conditions where alleviation of cough is desirable particularly those associated with colds and other virus infections of the upper respiratory tract. Also in whooping cough and coughs of allergic and psychogenic origin.

DOSAGE: Adults: One teaspoonful (3·5 mils) three to four times daily as required. The last dose of the day should be taken immediately before retiring. Children: ½-1 teaspoonful three to four times daily as required.

HOW SUPPLIED: In bottles of 3 and 40 fl. oz.

FIRST ISSUED: December 1958.

NOTES: Claimed well tolerated, of low toxicity, non-addictive and non-narcotic.

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**MEZURAN**

MANUFACTURER: Imperial Chemical Industries, Ltd., pharmaceuticals division, Wilmslow, Ches.

DESCRIPTION: Tablets each containing: Sulphadimidine, 0·5 gm.; phenylazo-diaminopyridine hydrochloride, 0·05 gm.

INDICATIONS: For the control of infection, pain and frequent micturition in cystitis, pyelitis, pyelonephritis, ureteritis and prostatitis due to organisms susceptible to sulphonamide therapy. Also prophylactically pre- and post-operatively in genito-urinary surgery and after diagnostic instrumentation.

DOSAGE: Adults: Two tablets every six hours. Children: 6-9 years: Half a tablet taken every six hours. 9-12 years: 1 tablet taken every six hours.

HOW SUPPLIED: In containers of twenty-five and 500 tablets.

FIRST ISSUED: December 1958.

REFERENCES: "The Sulphonamides" (Publishers H. K. Lewis &amp; Co., Ltd., 1950, p. 193). Am. J. Surg., 1943, 62, 330. Anesth. and Analg., 1946, 25, 110. J. Urol., 1940, 44, 381. Illinois Med. J., 1940, 78, 544.

SUPPLY RESTRICTIONS: P1, S.IV.

NOTE: Should be used with caution in renal and hepatic disease where accumulation is likely to occur.

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**CORANGIL**

MANUFACTURER: Allied Laboratories, Ltd., 140 Park Lane, London, W.1.

DESCRIPTION: Tablets with an outer coating containing glyceryl trinitrate and an inner core combining three long-acting vasodilatory and antispasmodic drugs. They provide, in one tablet, selective two-phase control in the anginal syndrome giving, when required, immediate relief in the acute attack with prolonged freedom from further attacks, or the tablets may be used routinely as a prophylactic. Each tablet contains: Outer coating: Glyceryl trinitrate, gr. 1/130; inner core: Pentaerythritol tetranitrate, gr. ¼; dihydroxypropyl theophylline, gr. 2; magnesium trisilicate, gr. 2; papaverine hydrochloride, gr. 1.

INDICATIONS: Prevention and treatment of angina pectoris, and the promotion of coronary dilatation following myocardial infarction.

DOSAGE: Acute attack: 1 tablet should be allowed to remain beneath the tongue until the outer coating has dissolved, and then swallowed. Maintenance: 1 tablet should be swallowed whole, three or four times daily, preferably at least one hour after meals. The dosage of 4 tablets daily should not be exceeded unless specified by the prescriber.

HOW SUPPLIED: In bottles of fifty, 250 and 1,000 tablets.

FIRST ISSUED: February 1959.

SUPPLY RESTRICTIONS: P1, S1.

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**PENVIKAL**

MANUFACTURER: May &amp; Baker, Ltd., Dagenham.

DISTRIBUTOR: Pharmaceutical Specialities (May &amp; Baker), Ltd., Dagenham.

DESCRIPTION: Tablets each containing 125 mgm. or 250 mgm. of potassium penicillin V (equivalent to 200,000 and 400,000 units of benzylpenicillin (penicillin G)).

INDICATIONS: Treatment of infections due to penicillin-susceptible organisms including pneumococci, streptococci, staphylococci, and some bacilli. May be given for continuous prophylaxis against streptococcal infection in cases of rheumatic heart disease and congenital heart defect. "Penikal" is also indicated for short-term prophylactic administration in such patients prior to and for a few days after the extraction of teeth, tonsillectomy and other operations within the oral cavity.

DOSAGE: The suggested average adult dose of penicillin VK is 125-250 mgm. at intervals of from four to six hours. The average dose for children is half this, and infants may be given one-quarter the adult dose; these may be increased at the discretion of the physician. In all but the most seriously ill patients it should not be necessary to continue administration during the night, and the last dose of the day may therefore be doubled.

HOW SUPPLIED: In containers of twelve, 100 and 500 125-mgm. and 250-mgm. tablets.

FIRST ISSUED: January 1959.

SUPPLY RESTRICTIONS: Therapeutic Substances Act.

NOTES: The tablets if stored in a cool, dry place, retain full potency until two years from the date of manufacture.

THE CHEMIST AND DRUGGIST Guide to New Medicaments, February 7, 1959

**ALGISPRAY**

MANUFACTURER: Castle Laboratories, Ltd., 77 Castle Street, Hinckley, Leics.

DESCRIPTION: A preparation for the relief of rheumatic conditions applied topically as a spray from an aerosol container, and containing:—Diethylamine salicylate, 5 per cent.; hydroxyethyl salicylate, 5 per cent.; methyl nicotinate, 1 per cent.; and vehicle to 100.

INDICATIONS: Rheumatic conditions.

METHOD OF USE: The spray is applied two or three times daily, the container being held about 6 in. above the affected area and the button depressed several times.

HOW SUPPLIED: In 4-oz. aerosol container.

FIRST ISSUED: November 1958.

# POISONOUS CHEMICALS IN AGRICULTURE

## Regulations governing their handling and use

SEVERAL of the most efficient weed-killers, insecticides and fungicides are cumulative poisons, and the Agriculture (Poisonous Substances) Regulations, 1956-58, were introduced especially to ensure that operatives are protected in handling them. Under the Regulations operatives must, when dealing with such substances, be supplied with, and must use, protective equipment.

The Regulations lay down certain obligations upon the employer. They govern the age and training of operatives; the cleaning and use of the protective clothing; the provision of washing and drinking facilities, etc. A register of operatives must also be kept which lists the number of hours each worker spends each day on any of the scheduled operations, the substances used, and any cases of illness, suspected illness, or unexplained absence from work after using one of the substances.

The Regulations also make it obligatory for workers to carry out the requirements as to protective clothing, personal hygiene, and drinking vessels, and they may not work for periods longer than those stipulated on the scheduled operations. They may not smoke, eat or drink while spraying or hauling the poisonous substances, and must take precautions when repairing spraying apparatus.

For easy reference the chemicals have been arranged in four groups and the Ministry of Agriculture, Fisheries and Food have issued a table which clearly indicates the protection that must be undertaken when carrying out various operations.

### Toxic Symptoms

The dinitro compounds caused a number of deaths among agricultural workers between 1945 and 1951. The group includes DNC (2-methyl-4:6-dinitrophenol) and dinoseb (2-(1 methyl-n-propyl)-4:6-dinitrophenol). Symptoms of poisoning by those compounds include headache, fatigue, excessive sweating, unusual thirst, and loss of weight. Organic compounds of phosphorus give rise to headaches, nausea, particularly after food or smoking, giddiness and weakness. Persons suffering from endrin poisoning feel dizzy and weak; they also have nausea and abdominal discomfort. Confusion of thought and a feeling of madness may develop, and larger amounts may cause unconsciousness and fits. Arsenic poisoning results in loss of appetite, abdominal pain and diarrhoea, irregular brown pigmentation of the skin, scaling of the skin on the palms of the hands and the soles of the feet with "pins and needles" and weakness experienced more in the legs than in the arms. The effects of poisoning by organic mercury compounds are insidious, and symptoms may not appear for some time after exposure. The central nervous system is affected, causing a lack of muscle co-ordination. The victim may be unsteady on his feet, unable to talk clearly, or carry out simple normal movements such as doing up buttons or writing. In severe cases of fluoracetamide poisoning there is a rapid onset of coma and convulsions after mental confusion with gastric discomfort.

Compounds that are not considered to have properties warranting inclusion in the Agriculture (Poisonous Substances) Regulations, but against which it is considered desirable that operators should take pre-

cautions during use, are subject to a number of labelling recommendations by the Ministry which manufacturers are requested to adopt. They are summarised overleaf.

LIST 1	LIST 2 continued	LIST 3
Dimefox	Endrin	Demeton-methyl (Metasystox)
Demeton (Systox)	Fluoroacetamide	
Mazidox (Nc7)	Mipafox	
	Parathion	
	Phosdrin	
	Potassium arsenite	
	Schradan	
	Sodium arsenite	
	Sulfotepp	
	Tepp (HETP)	
		LIST 4
Amiton and its salts		Organic-mercury compounds used as aerosols
DNC		
Dinoseb (DNBP)		

The regulations do not apply to DNC or dinoseb when used as an insecticide if the concentrated substance as bought does not contain more than 5 per cent. by weight of these chemicals. Careful handling is nevertheless necessary and is important. "Spraying" does not include "Soil application" when insecticides are applied to the soil in unbroken liquid form.

JOB FOR WHICH PROTECTIVE CLOTHING MUST BE WORN	CHEMICALS GROUPING	CLOTHING, ETC., TO BE WORN
Opening a container, or diluting, mixing or transferring from one container to another (but see next entry)	LIST 1	Rubber gloves, rubber boots, respirator and either (a) an overall and rubber apron or (b) a mackintosh
	2	Rubber gloves, rubber boots, face-shield and either (a) an overall and rubber apron or (b) a mackintosh
	3	Rubber gloves and face-shield
Operations as in previous entry when chemicals in next column are used as an insecticide (but see footnote)	DNC or dinoseb	Rubber gloves and either a face-shield or eye-shield
Washing or cleansing spraying apparatus	1 and 2	Rubber boots, face-shield and either (a) an overall and rubber apron or (b) a mackintosh
Spraying any ground crop, except from aircraft or in a greenhouse	1	Overall, hood, rubber gloves, rubber boots and respirator
	2	Overall, hood, rubber gloves, rubber boots and either a face-shield or a dust-mask
Spraying bushes, climbing plants (other than hops) or trees	1	Rubber coat, rubber gloves, rubber boots, sou'wester and respirator
	2	Rubber coat, rubber gloves, rubber boots, sou'wester and face-shield
Spraying hops	1	Rubber coat, rubber gloves, sou'wester and respirator
	2	Rubber coat, rubber gloves, sou'wester and face-shield
Spraying in a greenhouse (except where an aerosol or smoke-generator is used)	1	Rubber gloves, rubber boots, hood, respirator and either an overall or mackintosh
	2	Rubber gloves, rubber boots, hood, face-shield and either an overall or mackintosh
Applying aerosols in a greenhouse	1, 2, 3 and 4	Overall, hood, rubber gloves and respirator
Handling hops previously sprayed within (a) four days (b) twenty-four hours	1 and 2 except TEPP	Rubber gloves
Handling potato plants previously sprayed within ten days	TEPP	Sodium and potassium arsenites
Acting as a groundmarker for spraying ground crops from aircraft	1	Overall, hood, rubber gloves, rubber boots and a dust-mask
	2	Overall, hood, rubber gloves, rubber boots and respirator
Soil application (other than in a greenhouse) by (a) unaccompanied driver of apparatus, or (b) driver of tractor-mounted apparatus* accompanied by on-foot operators (c) any operator on foot	1 and 2	Overall, rubber gloves and rubber boots
	1 and 2	Overall, rubber gloves, rubber boots and rubber apron
Soil application in a greenhouse	1	Overall, rubber gloves, rubber boots and rubber apron and respirator
	2	Overall, rubber gloves, rubber boots and rubber apron

\*A driver, so accompanied, of tractor-drawn apparatus is exempt from the regulations so long as he is driving and not performing any of the scheduled operations listed above.

COMPOUND	PREPARATION	LABELLING RECOMMENDATIONS
aldrin hexachloro-hexahydrodithiophane-naphthalene	Emulsion concentrates and water dispersible powder concentrates	Wear rubber gloves when handling the concentrate; wash off with soap and water any concentrate on the skin. Avoid inhaling mist from diluted material during application; wash the hands and other exposed parts of the body with soap and water on the completion of any operation and before eating, drinking or smoking.
Diazinon	Dusting powders (ready for use)	Do not handle the dust unnecessarily; avoid inhaling the dust; wash the hands and other exposed parts of the body with soap and water on the completion of the operation and before eating, drinking or smoking.
	Emulsion concentrates and water dispersible powder concentrates	Wear rubber gloves and face shield when handling the concentrate; wash off with soap and water any concentrate on the skin. Avoid inhaling mist from the diluted material during application; wash the hands and other exposed parts of the body with soap and water on the completion of any operation and before eating, drinking or smoking.
	Acrosols	Wear rubber gloves and face shield when handling the concentrate; wash off with soap and water any concentrate on the skin. Wear a suitable mask to avoid prolonged breathing of the aerosol during use in enclosed spaces. Wash the hands and other exposed parts of the body with soap and water on the completion of any operation and before eating, drinking or smoking.
	Dusting powders (ready for use)	Do not handle the dust unnecessarily; avoid inhaling the dust or wear a suitable mask if using it in an enclosed space; wash hands and other exposed parts of the body with soap and water on completion of any operation and before eating, drinking or smoking.
	General (for all labels)	Diazinon is an organo-phosphorous material. Particular care should be taken when handling this product after using parathion, schradan, demeton or other toxic organo-phosphorous compounds, as harmful cumulative effects might arise.
hexachloro-epoxy-octahydro-dimethano-naphthalene	Emulsion concentrates and water dispersible powder concentrates.	Wear rubber gloves when handling the concentrate; wash off with soap and water any concentrate on the skin. Avoid inhaling mist from the diluted material during application; wash the hands and other exposed parts of the body with soap and water on the completion of any operation and before eating, drinking or smoking.
dieldrin (agricultural and horticultural use)	Dusting powders (ready for use)	Do not handle the dust unnecessarily; avoid inhaling the dust; wash the hands and other exposed parts of the body with soap and water on the completion of any operation and before eating, drinking or smoking.
dieldrin (stored products use)	Emulsion concentrates and water dispersible powder concentrates.	Wear rubber gloves when handling the concentrate; wash off with soap and water any concentrate on the skin. Wear a mask against droplets of spray when applying the diluted material inside bins and in similar confined spaces; wash the hands and other exposed parts of the body with soap and water on completion of any operation and before eating, drinking or smoking.
	Urea-formaldehyde resins	Wear full protective equipment (i.e. rubber gloves, rubber boots, overall, hood and respirator) against both droplets and solvent vapours when spraying these formulations under any conditions.
Dipterex dimethyltrichloro-hydroxy ethylphosphonate		If the skin is contaminated with the concentrate wash immediately and thoroughly with soap and water. Avoid prolonged exposure to the spray mist. Particular care should be taken when handling "Dipterex" after using demeton, parathion, schradan or other toxic organo-phosphorous materials as harmful cumulative effects might arise.
lead arsenate	Dust and paste concentrates—diluted and used as a spray.	Wear rubber gloves when using the concentrate and avoid breathing the dust concentrate. Avoid contact with spray mist. Spray across wind when possible. Do not spray in high wind. If eyes are contaminated with concentrate wash out immediately and thoroughly. If the skin is contaminated with concentrate wash immediately and thoroughly with soap and water. Wash exposed parts of the body before eating, drinking or smoking and after spraying.
	Dust concentrate—used undiluted as a dusting powder.	Avoid breathing the dust. Wear rubber gloves and an efficient dust mask or other efficient protection for the nose and mouth when using the product. If the eyes are contaminated with the concentrated dust wash out immediately and thoroughly. If the skin is heavily contaminated with the concentrated dust wash immediately with soap and water. Wash exposed parts of the body before eating, drinking or smoking and after dusting.

COMPOUND	PREPARATION	LABELLING RECOMMENDATIONS
malathion dimethyl dithiophosphate of diethyl mercapto succinate		Avoid prolonged breathing of the spray mist. Avoid contact with the skin; wash thoroughly after use. Malathion is an organo-phosphorous material. Particular care should be taken when handling this product after using demeton, parathion, schradan or other toxic organo-phosphorous materials, as harmful cumulative effects might arise.
Phenkaprone	Emulsion (emulsifiable) concentrates and water dispersible powder concentrates.	Wear rubber gloves and face shield when using the concentrate. If the skin is contaminated with concentrate, wash immediately and thoroughly with soap and water. If the eyes are contaminated with concentrate wash out immediately and thoroughly. Avoid exposure to the spray mist. Wash exposed parts of the body before eating, drinking or smoking and after spraying.
Rogor		Wear rubber gloves and face shield when using the concentrate. If skin contaminated with concentrate wash immediately and thoroughly with soap and water. If eyes contaminated wash out immediately and thoroughly. Avoid contact with spray mist. Wash exposed parts of the body before eating, drinking or smoking and after spraying. These precautions are particularly important if an operator has been using toxic organo-phosphorous compounds such as amiton, parathion, schradan and demeton, as harmful additive effects may arise.
streptomycin and oxytetracycline	Liquid water dispersible powder concentrates.  1 per cent. emulsion paint (streptomycin)	If the skin is contaminated with the concentrate, wash thoroughly with soap and water.  Wear rubber gloves, rubber boots, face-shield and a mackintosh or overalls with sleeves rolled down and collar fastened when using the paint. Manufacturers are requested to submit information to the Ministry of Agriculture, Fisheries and Food regarding the areas in which intensive spraying is being carried out so that general practitioners and hospital medical staffs can be warned to look out for any signs of untoward effect.

## MEDICAL ABSTRACTS

### ECONOMICS OF HOSPITAL SYRINGE SERVICE

FIGURES are given by Flood (*Lancet*, 1958, ii, 1114) to support a claim that the Ampin (see *C. & D.*, July 10, 1954, p. 32) disposable injection unit, may be so economical in use as to rule out the high initial capital cost and running expenses of a hospital central syringe sterilisation department. The Ampin, he writes, at present costs 7½d. to 8d. according to needle size. That cost could be reduced by large-scale production methods.

### PRIMIDONE INTO PHENOBARBITONE

PLAA, Fiyimoto and Hine (*J. Amer. med. Assoc.*, 1958, 168, 1769) cite three cases in which drug intoxication from primidone given in the treatment of epilepsy, seemed to suggest that the drug was converted *in vivo* into phenobarbitone. They made tests on rats, giving 100-150 mgm. of primidone daily to each by injection. A paper chromatogram of material extracted from the urine during five days showed that a barbiturate with the ultra-violet characteristics of phenobarbitone was present.

### ATROPINE INTOXICATION FROM EYE DROPS

ROUTINE administration of a 1 per cent. eye drops is given by Baker and Farley (*Brit. med. J.*, 1958, ii, 1390) as cause of psychosis in a patient they treated. The effects of the eye drops, which included changes affecting the heart muscle, were recognised as unusual. Treatment with the drops had extended over a 3½-week period. The authors suggest that conduct previously ascribed to emotional distress following an operation may in fact have been due to atropine intoxication.

### DEQUALINIUM IN MYASTHENIA GRAVIS

GRAHAM and Grant (*Brit. med. J.*, 1959, 1, 153) report an apparent effect of dequalinium (Dequadin) on muscular weakness. For a patient, diagnosed as a case of "full-blown syndrome of myasthenia," dequalinium (an 0.25-mgm. lozenge every three hours) was prescribed for inflamed fauces. A marked improvement in the muscular state was observed within twenty-four hours. "Blind" trials with dummy tablets and withholding the dequalinium only encouraged the view that the drug might have a place in treating the muscular condition.

### ELECTROLYTE LOSS FROM PURGATION

USING a radioactive-tracer technique and chemical methods, Coghill, McAllen and Edwards (*Brit. med. J.*, 1959, 1, 14) investigated three cases of electrolyte imbalance associated with the regular taking of purges. They found that an excessive loss of sodium, potassium and water had occurred. In a commentary on the findings the *B.M.J.* lists the purgatives most likely to cause such disturbance as being cascara sagrada and aloes, acting on the large intestine; jalap and colocynth (which intensify small intestine motility and reflexive activity of the large intestine); phenolphthalein, acting on the colon; and calomel (the mercuric ion released by the formation of mercuric oxide producing an irritant effect). Cathartics held to be unlikely to cause electrolyte imbalance are saline or bulk-producing substances.

### FACTORS IN CLINICAL RESEARCH

CONTROL, mensuration and analysis are advanced by Atkins (*Brit. Med. J.*, 1958, 2, 1547) as the essentials of sound clinical research. Experimental work, the author states in his comments on control, should not be completed and followed by literature research. Comparable groups should be chosen and case series of one locality should not be compared with those from a different locality. Controls are a necessity to advance but they should be applied with common sense and with the realisation that they cannot be introduced to the same degree as in the laboratory. Random selection methods are mentioned and these are related to the ethics of conducting investigations upon human patients so chosen. Indeterminate results and the cessation of the work also involves ethical considerations. Mensuration is best expressed in numerical terms. "Scattergrams" are useful but more accurate work may be expressed by an "exact coefficient of correlation." The dangers of applying mensuration to conditions and circumstances not readily applicable to the method is noted. The author discusses the value as well as the theoretical defects of the "mean clinical value." Lesions, visible or palpable, are noted as well as presence or absence of pain, so that a baseline may be prepared. Examination permits two marks for improvement, one for no change or slight progress and nothing for worsening. The total marks are divided by the number of lesions and the average so obtained is multiplied by six to arrive at the value figure.

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## TRADE REPORT

The prices given are those obtained by importers or manufacturers for bulk quantities or original packages. Various charges have to be added whereby values are in many instances augmented before wholesale dealers receive the goods into stock. Crude drugs and essential oils vary greatly in quality and higher prices are charged for selected qualities.

LONDON, FEBRUARY 4: There were few price changes in CRUDE DRUGS during the week, the most important being in SPICES.

TURMERIC advanced rapidly with news of a short crop and with little material available for prompt delivery. Cochin GINGER rose by 5s. per cwt. to 120s. on the spot while shipment prices were nominal. African GINGER was also dearer by 10s. per cwt. both spot and forward. PEPPERS continued to display firmness and most varieties showed gains on the week. Spot holders of TOLU BALSAW reduced their prices by a further one shilling per lb. for the "genuine as imported" material. In an attempt to compete with the B.P. material, shippers of the genuine balsam have reduced their price to 16s. per lb., c.i.f. Trading in HONEY continues fairly quiet and most prices are fractionally easier. Spot PAPAIN was reduced 2s. 6d. per lb. in line with lower offers from origin. Among AROMATIC SEEDS Indian CELERY was dearer for shipment at 143s. 6d. per cwt., c.i.f., against 137s. 6d.

In ESSENTIAL OILS the firm tone displayed by LEMONGRASS continued with shipment up one shilling per lb. and spot up ninepence. Chinese PEPPERMINT was nominal on the spot while shipment was not offering. Brazilian Bois de ROSE was easier by sixpence per lb.

ZINC OXIDE was reduced by 30s. per cwt. on February 2. CARMINE was lower by 5s. per lb.

### Cotton Yarn

Quotations for cotton yarn on the first day of free prices following the ruling of the Restrictive Practices Court (see C. & D., January 31, p. 117), fell steeply, though there was considerable irregularity in the prices quoted throughout Lancashire. It appears that the small manufacturers have rushed in quickly with new lists whilst the larger manufacturers are deciding what policy to adopt. It is early days to forecast at what level prices will stabilise, if indeed they become stable at all, but some reduction from the minimum prices operating previously seems inevitable. Subject to wages and other factors being unchanged it would seem likely that the lower costs should be reflected in the prices of bandages, lints and other dressings in which cotton yarn is present.

### Pharmaceutical Chemicals

ACETIC ACID. — B.P. glacial in 10-ton lots is £104 per ton naked and technical £91. Carboys are £8 and demijohns, £10 per ton extra. Single carboys cost 1s. 8d. per lb. (3s. 8d. per kilo).

AMMONIUM CHLORIDE. — Makers quote 1-cwt. lots of B.P. powder at 90s. per cwt. and are quoting extra-pure crystals at 126s.

ANEURINE HYDROCHLORIDE.—1-kilo quoted at £11 15s. and 10-kilo lots at £11 7s. 6d. per kilo.

ASCORBIC ACID. — Rate per kilo: 1 kilo, £4 2s.; 10 kilos, £3 18s. 6d. SODIUM ASCORBATE is offered at the same prices.

BENZYL BENZOATE.—One-ton lots of B.P. grade are at 4s. 6d. per lb.

BROMIDES.—Prices per lb. are as follows:

	1 cwt.	5 cwt.
POTASSIUM	s. d.	s. d.
SODIUM	2 6	2 5
AMMONIUM	2 10	2 8½

The prices quoted are for crystals (powder is 1½d. per lb. more) packages free, carriage paid terms. The kilo rates for 50-kilo lots are 5s. 6d. for potassium and sodium and 6s. 3d. for ammonium.

CALCIFEROL.—B.P. is 3s. 2d. per gm. for 1-kilo lots.

CALCIUM PANTOTHENATE.—Price per kilo is £11 12s. 6d.

CARMINE. — Price is 75s. per lb. for 1-cwt. lots.

CITRATES.—Present rates (per lb.) for 1-cwt. and 5-cwt. lots are as follows:

	1 cwt.	5 cwt.
SODIUM†	s. d.	s. d.
POTASSIUM†	2 10	2 9
IRON AND AMMONIUM*	3 1	2 11½
IRON AND AMMONIUM*	3 9	3 7½

†Powder 3d. per lb. more. \*Scales 10d. per lb. more.

CITRIC ACID.—Quotations (per cwt.) for domestic material are 225s. for 1-4-cwt. lots and 220s. for 5-cwt. lots.

CYANOCOBALAMIN. — 10-gm. lots are £47 10s. per gm., and 1 gm. £50.

DICOPHANE (DDT).—Prices are as follows:—1-cwt. lots 3s. 2d. per lb.; 5-cwt. 3s. 0½d.; 1-ton, 2s. 11d.

ERGOMETRINE. — For 20-gm. lots the price of the MALEATE, B.P. is £17 10s. per gm. and the TARTRATE, £16 5s. per gm.

ERGOTOXINE ETHANESULPHONATE. — Price per gm. for B.P.C. (1949) is: 1 gm., 68s. 9d.; 10 gm., 155s. 3d.

HYDROCYANIC ACID. — Dilute B.P.C. is from 3s. 2d. to 4s. per litre, as to quantity; Scheele's is from 3s. 10d. to 4s. 9d.

HYPOPHOSPHITES.—Prices per lb. are:—

	7 lb.	28 lb.	1 cwt.
	s. d.	s. d.	s. d.
CALCIUM, B.P.C.	6 9	6 4	5 11
IRON, B.P.C.	13 9	13 3	12 9
MAGNESIUM	11 6	11 1	10 8
MAGNESIUM, B.P.C.	13 11	13 5	12 11
POTASSIUM, B.P.C.	9 3	8 10	8 5
SODIUM, B.P.C.	7 7	7 2	6 9

HYDROQUINONE.—Quotations for 1-cwt. lots are 11s. 6d. per lb. or 25s. 4d. per kilo.

IRON SALIS. — GLUCONATE, B.P.C., is 6s. 3d. per lb. in 1-cwt. lots; SULPHATE, B.P. crystals are 9½d. per lb. in 28-lb. lots; 1-cwt. is 57s. 6d. per cwt. and 5-cwt., 52s. 6d. per cwt.; SULPHATE EXSICCATED is 1s. 5d. per lb. for 28-lb., 1-cwt., 123s.; 5-cwt., 113s. per cwt., 1-cwt. fibre kegs free. Other packages extra. PHOSPHATE, B.P.C., 28-lb., 3s. 6d. per lb.; 1-cwt., 3s. 3d. PHOSPHATE, SACCHARATED, B.P.C., 28-lb. lots are 3s. 9d. per lb.; 1-cwt., 3s. 6d. OXIDE, RED PRECIPITATED, B.P.C., 1949, 1-cwt., 2s. 1d. per lb.; CARBONATE, SACCHARATED, B.P.C., 1949, 28-lb., 3s. 3d.; 1-cwt., 3s. AMMONIUM CITRATE, scales, 6s. 6d. per lb.; granular, 5s. 9d. AMMONIUM SULPHATE, 1-cwt., 1s. 10d. per lb. QUININE CITRATE, 2s. 1d. per oz. in 100-oz. tin.

MENAPHTHONE.—B.P. is £11 per kilo; ACETOMENAPHTHONE, B.P., £11; WATER-SOLUBLE (menadione sodium bisulphite, U.S.P.), £15 per kilo.

NICOTINAMIDE. — Prices per kilo are now: 1 kilo, 70s.; 10 kilos, 66s. 6d.; 50 kilos, 64s. 6d.

NICOTINIC ACID. — Prices per kilo are 47s. 6d. for 1-kilo and 43s. 6d. for 50-kilo lots.

NIKETHAMIDE. — Prices per kilo are:—1 kilo, 110s.; 50 kilos, 100s.

PARAFFINS. — Prices to wholesale distributors are:— *Liquid*: HEAVY, B.P., £107 17s. 6d. per ton; LIGHT, B.P., £87 15s.; *Technical White oils*, £79 5s., for the LIGHT and £92 15s., for the MEDIUM. All in 40-50 gall. returnable loaned drums, delivered U.K. *Soft*: WHITE, medium consistency is now £110 15s. per ton. WHITE, soft consistency, £107 7s. 6d., and YELLOW, £88 10s., all B.P., in non-returnable drums delivered.

PYRIDOXINE. — Manufacturers' rate for 1 kilo is £75 per kilo; 10 kilos, £72 10s.

RIBOFLAVINE. — Price (per kilo) is £17 for 1-kilo and £16 12s. 6d. for 10-kilo lots.

SODIUM ACETATE.—B.P.C. in 28-lb. lots is 2s. 4d. per lb.; 1-cwt. 2s., and 5-cwt., 1s. 11d.

SODIUM BROMATE. — 1-cwt. lots are quoted at 9s. 9d. per lb.

SODIUM CARBONATE. — B.P.C. exsiccated is 70s. per cwt.; 5-cwt., 65s. per cwt.

SODIUM CHLORIDE. — Re-crystallised is 25s. per cwt. and B.P., 42s.

SODIUM METABISULPHITE. — Granular in 1-ton lots is from £48 12s. 6d. to £53 17s. 6d. per ton according to packing.

SODIUM PERBORATE. — Prices (per ton) are £145 15s. in 1-cwt. kegs; £138 5s. in 1-cwt. bags for B.P.C. (minimum 10 per cent. available oxygen). The PERBORATE MONOHYDRATE testing 15 per cent. available oxygen is £309 15s. and TETRAHYDRATE, from £131 15s. to £139 5s. per ton. as to packing.

SODIUM PERCARBONATE. — Price (per cwt.) is 170s. 9d. (bags, 7s. 6d. lower) for minimum 12½ per cent. available oxygen.

SODIUM PHOSPHATE. — B.P.C. powder is 2s. 3d. per lb.

SODIUM SALICYLATE.—Rates are now:—1-ton lots in bulk, 3s. 7d. per lb.; 5-cwt. 3s. 8d.; 1-cwt. 3s. 10d.

SODIUM SULPHATE.—Makers' prices for B.P. range from £12 10s. to £19 17s. 6d. per ton as to crystal and quantity, ex works.

SODIUM SULPHITE. — 1-ton lots on the spot of ANHYDROUS (48-50 per cent.) are £71 10s. per ton in 1-cwt. drums or £67 5s. in 1-cwt. bags. CRYSTALS, B.P.C., are £32 15s. per ton in 1-cwt. paper-lined bags. Commercial crystals are from £27 to £28 15s. as to packing.

SODIUM THIOSULPHATE. — Makers' price for 1-ton lots of photographic grade in paper-lined bags is £38 per ton.

THEOBROMINE. — Short. ALKALOID is nominally 27s. 6d. per lb.

VITAMIN A. — Synthetic. Supplied in strengths of 200,000 international units per gm. the price is 11½d. per million i.u. Natural is 1s. 4d. per million units.

VITAMIN D<sub>2</sub>. — In oil, 2 million units per gm. the price is 2d. per million international units. Crystalline: see under calciferol.

VITAMIN E (synthetic). — TOCOPHERYL ACETATE, B.P.C., 10 gm. to 100 gm., 1s. 2d. per gm.; 100 gm. to 1 kilo, 1s. per gm.; 1 kilo and under 10 kilos, £45 per kilo; 10 kilos, £44 15s. per kilo.

ZINC OXIDE. — Lower. B.P. quality in 2-ton lots is now £109; 1-ton, £109 10s.; 10-cwt., £111.

**Crude Drugs**

**ACONITE.** — Spot supplies of Spanish *nepellus* are 2s. 6d. per lb.

**ALOES.** — Cape prime on the spot is 220s. per cwt. and for shipment, 202s. 6d., c.i.f.

**ARECA.** — Sound nuts 1s. 6d. per lb., spot.

**BALSAMS.** — Quotations per lb. are:—  
**CANADA.** — Spot, 23s. **COPAIBA.** — Para from 7s. 6d., duty paid. **PERU.** — Spot, 9s. 10d. in bond. **TOLU** (genuine as imported): 17s. 6d., spot and 16s., c.i.f.; **B.P.**, 15s. 6d.

**BENZOIN.** — Sumatra block on the spot is £22 to £28 as to quality. Shipment not offering.

**CALAMUS.** — Root is quoted at 1s. 4d. per lb., c.i.f.

**CAMPHOR.** — **B.P. POWDER** is from 4s. 3d. per lb., duty paid. **TABLETS**, 4-oz., are 5s. 6d. in bond.

**CARDAMOMS.** — Aleppy greens are offered on the spot at 14s. per lb.; January–February shipment is 12s. 4d., c.i.f.; Seeds, spot, 24s., shipment, 19s. 6d., c.i.f.

**CASCARA.** — Spot 1958 peel, 240s. per cwt.; shipment, 200s. to 210s., c.i.f.

**CHERRY BARK.** — Thin natural is 1s. 5d. per lb., and rossed is 1s. 11d.

**CINNAMON.** — Ceylon for shipment (c.i.f.) per lb.; **OOOO**, 6s. 9d.; **OOO**, 6s. 7½d.; **OO**, 6s. 4½d.; seconds, 4s. 7½d.; featherlings, 1s. 4½d.; quillings, 4s. 1d.; chips, 1s.

**CLOVES.** — Zanzibar on the spot are 3s. per lb.; shipment, 2s. 8d., c.i.f.

**COCILLANA.** — Bark is 1s. 8d. per lb. on the spot.

**COCHINEAL.** — Silver-grey Peruvian quoted 6s. 4d. per lb., c.i.f.; Canary Isles black-brilliant, 20s. 6d.; silver-grey, 17s. 6d. spot.

**COLOCYNTH PULP.** — Spot, 3s. per lb.

**ELEMI.** — Spot from 1s. 10½d. per lb.

**GENTIAN.** — Spot; French, 170s. per cwt.; Jugo-Slavian, 152s. 6d.

**GINGER.** — African, 122s. 6d. per cwt. spot and 112s. 6d., c.i.f. Jamaican No. 3, spot, 265s. and shipment 240s., c.i.f. Cochin spot 120s.; shipment nominal.

**GUM ACACIA.** — Kordofan cleaned sorts are 132s. 6d. per cwt. on the spot; January–February shipment, 119s., c.i.f.

**HONEY.** — Australian light-amber is 110s. to 115s. and medium amber 100s. to 105s. Argentine, 120s. to 125s.; Jamaican, 125s. to 130s.; New Zealand clover, 160s. to 170s.; all per cwt. on the spot.

**IPECACUANHA.** — Shipment (c.i.f.) Matto Grosso, 53s. per lb.; Colombian, 53s.; Costa Rican, 72s. 6d., nominal.

**KOLA NUTS.** — Jamaican spot market cleared, shipment, 7d. per lb., c.i.f. African 5d. to 5½d. spot and 4d., c.i.f.

**LANOLIN.** — **ANHYDROUS**, **B.P.**, is from 170s. to 175s. per cwt. in 1-ton lots and **HYDROUS**, **B.P.**, 150s., free drums, delivered.

**LIQUORICE.** — Natural root; Persian on the spot is 50s.; for shipment, 42s. 6d., c.i.f., per cwt. Block juice: Anatolian and Chinese, 190s. per cwt., Italian stick from 310s. to 476s. per cwt. Spray dried extract, 2s. 10½d. per lb.

**LOBELIA HERB.** — Spot offers of American are 3s. 9d. per lb. and for shipment, 3s. 6d., c.i.f. Dutch 3s. 1d., c.i.f. for shipment; spot, 3s. 5d.

**LYCOPODIUM.** — Russian triple-sifted offering at 25s. per lb., c.i.f.

**MACE.** — Whole on the spot is 23s. 6d. per lb.

**NUTMEGS.** — West Indian 80's 17s. per lb., spot; sound unassorted, 12s. 9d.; defectives, 9s.

**ORANGE PEEL.** — Scarce. Spot: Sweet ribbon, 2s. per lb.; bitter quarters: West Indian, 1s.; Spanish, 1s. 8d.

**ORRIS ROOT.** — Florentine is 335s. per cwt.

**PAPAIN.** — East African, 21s per lb., c.i.f., for grade one, spot, 22s. 6d.

**PEPPER.** — White Sarawak spot, 2s. 9½d. per lb., February shipment, 2s. 9½d., c.i.f.; Black Sarawak spot, 1s. 7½d. nominal; February shipment, 1s. 6½d., c.i.f. Black Malabar new-crop for February shipment, 207s. 6d.; spot, 212s. 6d.

**PEPPERMINT LEAVES.** — Dutch, 2s. 2d. to 2s. 10s. per lb., c.i.f.

**PIMENTO.** — Spot value is 550s. to 560s. per cwt.

**PYRETHRUM.** — Extract, minimum 25 per cent. w/w pyrethrins, is 75s. per lb. for small lots.

**QUASSIA.** — Shipment offers (January) are at 39s. per cwt., c.i.f.

**QUILLAIA.** — Spot offers of whole bark at 130s. per cwt.; cut, 170s.; crushed, 165s. Whole for shipment, 107s. 6d., c.i.f.

**RAUWOLFIA.** — *Canescens*, 2s. per lb., c.i.f.; *Vomitoria*, 2s. 3d., c.i.f.; *Serpentina*, 6s., c.i.f. asked.

**SAFFRON.** — Spanish is quoted at 220s. per lb.

**SARSAPARILLA.** — Jamaican native red on the spot is 2s. 9d. per lb. Shipment, 2s. 6d., c.i.f.

**SEEDS.** — (Per cwt.) **ANISE.** — Spanish, 170s.; Turkish, 140s.; both spot, duty paid. **CARAWAY.** — Dutch quoted at 122s. 6d., duty paid. **CELERY.** — Indian is 160s. to 162s. on spot; shipment dearer with up to 150s., c.i.f., now quoted. **CORIANDER.** — Moroccan on spot 50s., duty paid, and for shipment, 43s. 6d., c.i.f., quoted. **CUMIN.** — Firm. Spot Cyprian, 260s. and Iranian, 240s., in bond. **DILL.** — Indian 72s. 6d. spot nominal; shipment, 58s. 6d., c.i.f. **FENNEL.** — Chinese, 145s., duty paid, Indian, 155s. **FENUGREEK.** — Moroccan quoted at 45s., duty paid. **MUSTARD.** — English firm at 125s.

**SENEGA.** — Spot offered at 14s. 6d. per lb.; shipment scarce.

**SENNA.** — *Tinnevelly* LEAVES, prime No. 1, 1s. 5d. per lb., f.a.q., No. 3, 10d. PODS, manufacturing (f.a.q.) 1s. 3½d. and hand-picked, 1s. 9d. to 2s. 2d. *Alexandria* pods: Manufacturing, offered from 1s. 6d. with hand-picked from 4s. to 6s. 6d.

**SHELLAC.** — F.O.T.N. 177s. 6d. per cwt., F.O. No. 1, 207s. 6d.; fine orange, 215s. to 265s.

**SLIPPERY ELM.** — Grinding quality bark is 2s. 7d. per lb.

**SQUILL.** — White is quoted at 85s. per cwt. on the spot.

**STRAMONIUM.** — Indian LEAVES 70s. per cwt., and European, 80s., spot. Dutch 0·5 per cent. alkaloid, 94s., c.i.f., shipment.

**STYRAX.** — Spot, 29s. per lb., shipment, 23s., c.i.f.

**TONQUIN BEANS.** — Para on the spot are offered at 8s. 3d. per lb. Angostura, 11s.

**TRAGACANTH.** — No 1 ribbon is £115 to £120 per cwt. No. 2, £105 to £110.

**TURMERIC.** — Madras finger is 70s. to 75s. on the spot as to seller; new crop for shipment, 73s., c.i.f.

**VALERIAN ROOT.** — Spot: Indian (with rootlets) is 130s. and Belgian, 175s. to 195s. per cwt. Dutch (max. 2½ per cent. sand) for prompt shipment, 159s., c.i.f.

**VANILLIN.** — Rates (per lb.) are now:— 5-cwt. lots, 25s. 3d.; 1 cwt., 25s. 6d.; 56-lb., 25s. 9d.; smaller quantities, 26s.

**WAXES.** — (Per cwt.) **BEES'.** — Dar-es-Salaam, spot, 480s.; shipment, 460s., c.i.f. Abyssinian, spot, 450s. in bond; shipment, 435s. c.i.f. Benguela spot, nominal; shipment, 410s., c.i.f. **CANDELILLA.** — Spot 460s. **CARNAUBA.** — Fatty grey spot, 575s.; for shipment, 555s., c.i.f. Prime yellow, spot, 900s.; shipment, 865s., c.i.f.

**Essential and Expressed Oils**

**ANISE.** — Chinese, 8s. per lb., spot; shipment, 7s. 10d., c.i.f.

**BOIS DE ROSE.** — Brazilian is 14s. 6d. per lb. on the spot and 13s. 6d., c.i.f.

**CADE.** — Spanish is 2s. 6d. per lb. for drum lots.

**CAJUPUT.** — Spot supplies are from 10s. per lb.

**CALAMUS.** — Spot quotations are 62s. 6d. per lb.

**CAMPHOR, WHITE.** — Chinese is 1s. 9d. per lb. in bond.

**CANANGA.** — Spot is from 47s. 6d. to 50s. per lb.

**CARAWAY.** — English-distilled is offered at 55s. and imported 26s. 6d. per lb.

**CARDAMOM.** — Price per lb. is from 350s. for English-distilled and 267s. 6d. for imported.

**CEDARWOOD.** — 1-cwt. lots of American are 5s. per lb. and Kenya, 4s.

**CITRONELLA.** — Ceylon, spot is 3s. 10½d. shipment, 3s. 3½d., c.i.f. Formosan, spot 3s. 10½d., in bond; shipment, 3s. 7d., c.i.f.

**COD-LIVER.** — **B.P.** is 11s. 6d. per gall. in charged returnable drums. Veterinary is from 9s. 6d. per gall.

**CUBEB.** — Small spot supplies of imported are 65s. per lb.

**GERANIUM.** — Bourbon is 112s. 6d. per lb. on the spot and 110s., c.i.f. Algerian, 105s.

**LAVANDIN.** — Spot is from 10s. to 12s. 6d. per lb. for original drums.

**LAVENDER.** — French oil, 40–42 per cent. is 42s. per lb.

**LAVENDER SPIKE.** — Spanish is at 16s. 6d. to 17s. 6d. per lb. for original drums.

**LEMONGRASS.** — Spot 6s. 6d. per lb. and shipment, 6s. 6d., c.i.f.

**NUTMEG.** — Imported **B.P.** oil is from 70s. to 92s. 6d. per lb. English-distilled, 95s. to 97s. 6d. as to quantity.

**OLIVE.** — French is 21s. 6d. to 23s. per gall. on the spot, for **B.P.** quality. Spanish 23s. 9d. per gall. For shipment, Algerian is £225–£230 per 1,000 kilo, c.i.f. and Tunisian £230–£235, c.i.f.

**PEPPERMINT.** — *Arvensis*: Chinese is 25s. per lb. spot nominal; shipment not offering. Brazilian, 8s. spot, and 7s. 9d. c.i.f. Formosan, 16s. 6d., spot; new-crop for January–February shipment. 14s. 6d., c.i.f. *Piperita*: Italian "Mitcham-type" from 42s. 6d. to 50s.; American 27s. 6d. to 30s., as to origin.

**PIMENTO.** — English-distilled berry is 180s. per lb.; imported, 77s. 6d. Rectified leaf, 27s. 6d. per lb. for small lots.

**ROSEMARY.** — Spanish is 8s. 6d. per lb. on the spot for best quality.

**SANDALWOOD.** — Mysore offered from 82s. 6d. to 85s. per lb. as to source. East Indian, 82s. 6d., spot.

**SPEARMINT.** — Offers of U.S.P. grade are from 37s. 6d. to 42s. 6d. per lb., spot. Chinese, 25s., spot and 23s., c.i.f., per lb.

**YLANG YLANG.** — Spot is from 32s. 6d. to 46s. per lb. as to grade.

**UNITED STATES REPORT**

**NEW YORK, FEBRUARY 3:** A 30-cent drop brought *p-AMINOSALICYLIC ACID* down to \$3·40 a lb. **COPAIBA BALSAM** rose 15 cents to 55 cents a lb. while **PERU BALSAM** advanced an equal amount to \$1·45. A sharp decline brought **LYCOPODIUM** down from \$7 to \$4·75 a lb. **LEMONGRASS OIL** advanced five cents to 95 cents and Florida **TANGERINE OIL** to \$3·10, up ten cents a lb. **EUCALYPTUS OIL** lost 5 cents a lb. making the 70-75 per cent., 55 cents and the 80-85 per cent., 63 cents.

## TRADE MARKS

APPLICATIONS ADVERTISED  
BEFORE REGISTRATION

From the "Trade Marks Journal," January 14

For preparations for the hair (3)

VAVIT, 779,236, by C. H. Boehringer Sohn, Ingelheim-on-Rhine, Germany.

For perfumes, non-medicated toilet preparations, toilet articles, preparations for the hair, soaps and dentifrices (3)

CILOREAL, 782,721, by Société Monsavon-L'Oréal, Paris, France.

For all goods (5)

FILIBON, 777,094, by American Cyanamid Co., New York, U.S.A. Device with word SISY, 782,118, by Coöperative Condensfabrik "Gelderlanderoverijset," G.A., Deventer, Holland.

For pharmaceutical preparations for the treatment of disorders of the muscular, nervous and alimentary systems, all for sale in the United Kingdom (5)

TRACTOPAN, 779,103, by Bayer Products, Ltd., Kingston-on-Thames, Surrey.

For pharmaceutical preparations for human and veterinary use, sanitary substances, medical and surgical plasters, material prepared for bandaging, disinfectants and antiseptics (5)

ANTURAN, 779,442, by J. R. Geigy, S.A., Basle, Switzerland.

For pharmaceutical substances and preparations for human use (5)

PARABAL, 779,781, by West Pharmaceutical Co., Ltd., London, S.W.1.

For preparations for protecting and preserving plants; insecticides, fungicides and vermin destroying preparations; moth repelling and destroying preparations; insect repelling preparations for human use; disinfectants (5)

DIAZITOL, 780,256, by J. R. Geigy, S.A., Basle, Switzerland.

For pharmaceutical preparations in the form of creams, gels, films, tablets and jellies; and antiseptics, germicides, and suppositories; all for vaginal application (5)

DELFIN, 780,840, by Ortho Pharmaceutical Corporation, Raritan, New Jersey, U.S.A.

For anaesthetics (5)

ASTRACAINE, 780,948, by A.B. Astra, Apotekarnes Kemiska Fabriker, Söderläje, Sweden.

For pharmaceutical preparations (5)

SYNAPROL, 781,784, by Farbenfabriken Bayer, A.G., Leverkusen, Germany.

For pharmaceutical and veterinary preparations, all being for export (5)

ADROMIN, 782,338, by Glaxo Laboratories, Ltd., Greenford, Middlesex.

For preparations for destroying slugs (5)

ECRODON, 782,740, by Doff-Portland, Ltd., Hucknall, Notts.

For cameras and reproducing apparatus and parts; and projection apparatus; all for cinematographic or photographic purposes (9)

DIAMATOR, 781,396, by Agfa, A.G., Leverkusen, Germany.

For pads and socks (insoles) and foot arch supports, none being medicated and all for surgical or curative purposes (10)

LUSTREL, 781,722, by Scholl Manufacturing Co., Ltd., London, E.C.1.

From the "Trade Marks Journal," January 21

For sensitised films for making graphic reproductions (1)

PRINTON, 768,396, by Agfa, A.G., Leverkusen-Bayerwerk, Germany.

For all goods (1)

HEXAPEST, 782,284, by The British Drug Houses, Ltd., London, N.1.

For detergents (not for use in industrial or manufacturing processes) (3)

DETERSAN, 782,164, by J. Bibby & Sons, Ltd., Liverpool.

For antibiotics and antibiotic preparations (5)

ANCOMYCETIN, 767,099, by Meso Laboratories, Ltd., London, E.C.2.

For pharmaceutical preparations containing vitamins (5)

QUARZAN, 776,491, by Roche Products, Ltd., Welwyn Garden City, Herts.

For pharmaceutical tonic preparations for human use, all being goods for export (5)

VIE D'OR, 778,253, by H. & T. Kirby & Co., Ltd., London, N.W.2.

## COMING EVENTS

Items for inclusion under this heading should be sent in time to reach the Editor not later than first post on Wednesday of the week of insertion.

### Monday, February 9

LONDON UNIVERSITY, physiology theatre, University College, Gower Street, W.C.1, at 5 p.m. Professor A. Haddow (Chester Beatty Research Institute) on "The Chemistry and Biology of Cancer."

NOTTINGHAM AND DISTRICT BRANCH, PHARMACEUTICAL SOCIETY, Medico-Chirurgical Society's lecture room, 64 St. James's Street, at 7.30 p.m. Professor A. D. Macdonald on "Tranquillising Drugs."

### Tuesday, February 10

BIRMINGHAM AND DISTRICT BRANCH, PHARMACEUTICAL SOCIETY, Imperial hotel, at 8 p.m. Mr. T. Reid (a member of Council) on "The Future of Professional Pharmacy."

EAST KENT BRANCH, PHARMACEUTICAL SOCIETY, Falstaff hotel, Canterbury, at 8 p.m. Mr. H. J. Bragg on "Formulation and Pharmaceutical Development."

LONDON CHEMISTS GOLFING SOCIETY, Hendon Hall hotel, Ashley Lane, N.W.4, at 7.30 p.m. Annual dinner and dance.

LONDON SECTION, ROYAL INSTITUTE OF CHEMISTRY, Sir John Cass College, Jewry Street, E.C.3, at 6.30 p.m. Dr. E. Lester Smith on "Vitamin B<sub>12</sub>, Recent Advances."

PRESTON AND DISTRICT PHARMACISTS' ASSOCIATION, Co-operative assembly rooms, Ormskirk Road, at 7.45 p.m. Illustrated slide lecture (Kodak, Ltd.).

### Wednesday, February 11

BURNLEY AND DISTRICT BRANCH, PHARMACEUTICAL SOCIETY, Cross Keys hotel, St. James Street, at 7.45 p.m. Mr. H. Steinman (a member of Council) on "Matters Pharmaceutical."

EDINBURGH AND SOUTH-EASTERN SCOTTISH BRANCH, PHARMACEUTICAL SOCIETY, Society's House, 36 York Place, at 7.45 p.m. Film show.

ENEFIELD AND DISTRICT CHEMISTS' ASSOCIATION and BRANCH, PHARMACEUTICAL SOCIETY, Firs hall, Winchmore Hill, at 8 p.m. Supper-dance, Ticket, 12s. 6d.

EXETER AND DISTRICT BRANCH, PHARMACEUTICAL SOCIETY, Imperial hotel, Annual dinner and dance.

GLASGOW AND WEST OF SCOTLAND BRANCH, PHARMACEUTICAL SOCIETY, at 7.45 p.m. Mr. J. Maedonald (A. C. Neilson Co., Ltd.), on "Factors in Successful Retail Business."

SUNDERLAND AND DISTRICT BRANCH, STUDENTS' ASSOCIATION, PHARMACEUTICAL SOCIETY, Bay hotel, Whitburn, at 7.30 p.m. Annual dinner and dance. Ticket, 12s. 6d.

WESTERN [LONDON] PHARMACISTS' ASSOCIATION, 21 Portman Square, W.1, at 7.30 p.m. Mr. B. Myers on "Shop-fitting Problems in Pharmacy."

### Thursday, February 12

ABERDARE AND MERTHYR BRANCH, PHARMACEUTICAL SOCIETY, Whitehall rooms, Park hotel, Cardiff, at 8 p.m. Dinner dance. Ticket, 25s.

BOURNEMOUTH and POOLE AND EAST DORSET BRANCHES, NATIONAL PHARMACEUTICAL UNION, Grand hotel, Bournemouth, at 7.45 p.m. Mr. G. H. M. Graham, O.B.E. (a member of the N.P.U. executive committee).

HARROGATE AND DISTRICT BRANCH, PHARMACEUTICAL SOCIETY, Blue Bird café, Parliament Street, at 7.30 p.m. Dr. E. W. Tapley (Roussel Laboratories, Ltd.), on "Corticosteroid Therapy."

HULL CHEMISTS' ASSOCIATION AND BRANCH, PHARMACEUTICAL SOCIETY, New York ball-room. Dance. Ticket, 7s. 6d.

LEEDS AND DISTRICT BRANCH, PHARMACEUTICAL SOCIETY, Metropole hotel, at 7.45 p.m. Dr. W. A. F. Macdonald on "Adam to the Atom."

LONDON UNIVERSITY, eugenics theatre, University College, Gower Street, W.C.1, at 5 p.m. Mrs. N. Korah on "Restrictive Trade Practice, Current Legal Problems."

SOUTH-EAST LONDON CHEMISTS' ASSOCIATION and BRANCH, PHARMACEUTICAL SOCIETY, Yorkshire Grey ball-room, Eltham Green, S.E.19, at 6.45

p.m. Annual dinner, dance and cabaret. Tickets, 30s.

SUNDERLAND AND DISTRICT BRANCH, PHARMACEUTICAL SOCIETY, Grand hotel, at 7.30 p.m. Members' discussion night.

THAMES VALLEY BRANCH, NATIONAL PHARMACEUTICAL UNION, Kingston hotel, Kingston-upon-Thames, at 7.45 p.m. Annual meeting followed by Mr. G. T. M. David (vice-chairman, N.P.U. executive) on "Living in a Revolution."

## Advance Information

LONDON BRANCH, GUILD OF PUBLIC PHARMACISTS, Auditorium, Wellcome Building, 183 Euston Road, London, N.W.1, at 2.45 p.m., on Saturday, February 28. Special meeting to review the grading system of posts in the hospital service. All members urged to attend.

## C. & D. WEEKLY LIST OF PRICES

A=Advanced; R=Reduced; I.R.P.=Inclusive Retail Price; \* = Tax 30 per cent.; ‡ = Tax 60 per cent.

CROOKES LABORATORIES, LTD. (from January 23)

	Each	I.R.P.
Crookes vitamin A capsules	25 3 10 5 9 R	
	100 13 4 20 0 R	
	500 65 4 98 0 R	

DUNCAN, FLOCKHART & CO., LTD.

	Chloroform pure, Duncan	150 mils	3 4 R
		250 mils	4 9 R

WILLIAN EDGE & SONS, LTD.

	Drummer fly spray aerosol	4 6 R
		9 0 R

Air purifier aerosol 4 6 R

IMPERIAL CHEMICAL INDUSTRIES, LTD. (from January 9)

	Mepavlon tablets	Doz.	4 6 R
	400 mgm. 30	74 0	9 3 R
		Each	
	250	44 2	66 3 R

LEDERLE LABORATORIES DIVISION (CYANAMID OF GREAT BRITAIN), LTD. (from February 9)

	Miltown tablets	400 mgm. 50	10 4 15 6 R
		250	44 2 66 3 R
	capsules	200 mgm. 50	7 4 11 0 R
		250	27 6 41 3 R
		400 mgm. 50	10 4 15 6 R
		250	44 2 66 3 R

SAVORY & MOORE, LTD.

	Quinasp*	16 8 A 2 6
	Medibalm ointment	13 6 A 2 0

THOMPSON & CAPPER, LTD.

	Mothak fly spray aerosol	37 1 4 3 R
	Parador air freshener aerosol	37 1 4 3 R

A. WANDER LTD. (from February 7)

	Wander diabetic chocolate	plain	14 5 1 6 A
		milk	16 0 1 8 A
		nut	16 10 1 9 A

JOHN WYETH & BRO., LTD. (from February 9)

	Equanil tablets	400 mgm. 20	49 0	5 6 R
		250	44 2	58 11 R

	Equanil H.S. tablets	200 mgm. 20	31 6	3 6 R
		250	26 3	35 0 R

## NEW PRODUCTS AND PACKS

W. B. CARTWRIGHT, LTD. Doz. Penetrol spray 19 3 2 9

F. FARTHING & CO., LTD. Apilla royal jelly hand-cream‡ 28 6 5 0

86 0 15 0

FASSETT & JOHNSON, LTD. Tattoo roll-on mascara‡ 32 10 5 9

Sinclair's Kurbs\* 128 0 19 3

ALFRED FENNINGS Fennings Little Healer\*

tube 1 9

MERCK SHARP & DOHME, LTD. Decadron tablets 0.5 mgm. Each 500 370 0

MONDART, LTD. Max air freshener; moth proofer; fly killer aerosols 40 6 4 6

REMINGTON RAND, LTD. Rolllectric shaver\* 219 5

HELENA RUBINSTEIN, LTD. "Beauty overnight" cream‡ 1 oz. 12 6

2 oz. 22 6

## TELEVISION

Programme details are given to enable chemists to put in linking-up displays if they wish. Figures in the columns represent number of appearances of the product during the week.

February 15-21	London	Midland	North	Scotland	Wales	South	N.E.
Alka-Seltzer	..	1	2	2	2	—	—
Amami wave set	..	3	2	2	—	2	2
Anadin	..	3	4	5	3	3	4
Andrews liver salt	..	—	—	—	—	2	—
Angier's junior aspirin	..	2	3	—	—	—	—
Anne French	..	3	3	1	—	—	—
Antussin	..	4	3	3	—	—	—
Askit	..	—	—	—	12	—	—
Aspro	..	10	8	5	5	5	5
Beecham's pills	..	—	2	3	—	—	3
Beecham's powders	..	4	2	3	3	1	—
Bisodol	..	—	1	—	—	—	—
Bristow's shampoo	..	3	2	2	3	3	4
Brylcreem	..	3	3	3	3	3	3
California syrup of figs	..	—	1	2	—	—	—
Camay soap	..	2	3	2	4	2	2
Christy's liquid lanolin	..	3	—	—	—	—	—
Cojene	..	—	4	—	—	—	—
Delrosa	..	—	—	—	—	2	2
Delsey toilet tissue	..	1	3	—	3	—	3
Digestif Rennies	..	1	1	1	3	1	—
Diuronil	..	—	—	—	1	—	—
Eno's Fruit Salt	..	2	—	—	—	—	—
Fennings' Little Healers	..	—	1	3	—	1	1
Ferguzade	..	—	—	—	5	—	—
Germolene	..	3	4	4	4	—	4
Gibbs' S.R. tooth-paste	..	—	—	—	4	—	—
Gillette razors and blades	15	15	15	15	15	15	15
Handy Andies	..	—	1	—	—	3	—
Horlicks	..	3	3	3	2	4	2
Imperial Leather soap	..	3	3	3	3	—	3
Iron Jelloids	..	—	—	3	—	3	3
Kleenex tissues	..	2	2	2	3	3	2
Knight's Castile soap	..	8	7	7	—	7	—
Kolynos tooth-paste	..	—	1	—	—	—	—
Lanospray	..	2	1	1	1	1	—
Lantigen "B"	..	—	1	1	1	1	1
Leetrie shave	..	—	1	—	—	—	—
Lemskin	..	3	3	3	3	—	—
Lloyd's adrenaline cream	1	—	—	—	—	—	—
Loxene medicated shampoo	2	1	2	2	2	2	2
Lucozade	..	3	4	4	3	4	5
Maclean's tooth-paste	..	3	3	3	4	3	—
Marigold baby pants	..	—	—	—	4	2	1
Max Factor preparations	3	1	2	3	2	1	1
Mayfair personal weigher	..	1	—	—	1	—	—
Medie-Aire	..	2	—	—	—	—	—
Mentholutum rub	..	—	—	1	—	—	—
Milk of Magnesia	..	2	—	—	3	—	—
Milk of Magnesia tablets	..	—	2	2	—	2	2
Milpar	..	—	3	—	—	—	—
Moorland tablets	..	2	1	1	—	1	1
Nemakol	..	—	1	2	2	1	3
Owbridge's lung tonic	..	1	1	1	—	1	2
Pacquins	..	2	2	2	2	3	—
Penetrol	..	—	1	1	1	—	1
Phensie	..	—	1	3	3	2	—
Phillips tooth-paste	..	1	—	—	—	—	—
Phosferine	..	3	2	1	1	—	3
Phosferine tonic wine	..	—	1	—	—	—	—
Phyllosan	..	—	1	3	3	—	—
PLJ	..	—	3	3	3	3	—
Potter's catarrh pastilles	..	2	2	2	1	1	1
Preparation H	..	—	—	—	1	—	—
Punch and Judy tooth-paste	1	—	—	1	—	—	—
Ribena	..	2	4	4	2	3	3
Rinstead pastilles	..	—	—	—	1	—	—
Sanatogen	..	4	4	1	—	—	—
Savlon barrier cream	..	2	2	2	2	2	2
Savlon lozenges	..	2	3	2	2	3	3
Scotties	..	3	2	2	3	2	2
Scott's emulsion	..	—	2	2	—	—	—
Sea Pearls	..	—	—	4	—	—	—
Setlers	..	—	4	1	—	4	5
Shavex	..	—	2	2	—	—	—
Silvikrin shampoo	..	2	2	2	—	2	2
Silk 'N Satin	..	—	1	—	—	—	—
Saqzy	..	—	—	4	3	—	8
Suregrip house gloves	..	2	2	2	2	2	1
Thermogene	..	—	1	—	—	—	—
Valderma	..	3	—	3	4	—	—
Valpak	..	—	1	1	1	—	—
Valrosa	..	—	—	—	—	1	—
Veno's cough mixture	..	3	3	3	3	3	4
Vosene shampoo	..	4	4	4	4	4	3

Yeast-Vite .. .. .. 1 1 1 1 — Zubes .. .. .. 3 4 3 2 2 2 —  
Zeph .. .. .. — — 2 — 3 Zubes cough mixture .. .. .. 1 — — 1 —

## C. &amp; D. RETAIL AND DISPENSING PRICE LIST

The drug index for January was 208·2

Cost	Item	16 oz.	4 oz.	1 oz.	1 dr.
d.	per	s. d.	s. d.	s. d.	s. d.
111	Acetum ipecac., B.P.C., '49	—	3 7	1 1	0 2
24	Acid. hydrocyan. dil. ...S.I.(5)	—	—	3 5	0 6
51	Areca pulv.	—	1 8	0 6	0 1
116	Argenti nitras cryst.	—	—	—	2 4
135	Balsam. tolu.	—	—	5 9	0 10
48	Carum	—	1 7	0 5½	0 1
180	Cetomacrogol 1,000, B.P.C.	—	5 9	1 9	0 3
42	Cinnamomi pulvis opt.	—	—	1 9	0 3
222	Crem. antazolin., N.F. ...S.I.(5)	—	7 2	2 2	0 3½
41	Ext. bellad. virid., B.P.C. S.I. (5)	—	—	5 10	0 10
105	Ext. case. sagr. liq.	—	3 4	1 0	0 1½
339	Ext. ipecac. liq. ...S.I.(5)	—	—	2 0	0 2 0
54	Ext. nuc. vom. liq.	—	—	1 3	—
87	Ext. quassiae, B.P.C., '49	—	—	—	—
50	Ferri et ammon. citras	—	2 10	0 10	0 1½
66	Glycerinum	7 2	2 0	0 7½	0 1
129	Hexamina, B.P.C.	—	2 1	0 7½	0 1
74	Hydrargyrum wgt.	—	—	5 6	0 9
54	Hydrarg. c. creta	—	—	3 4	0 5
84	Ichthammol	—	—	2 0	0 3½
141	Inf. caryophylli conc., B.P., '48	—	2 8	0 10	0 1½
35	Inf. rhei conc., B.P.C.	—	4 6	1 4	0 2½
39	Iodium	—	—	3 0	0 5
84	Liq. ammon. acet. fort.	—	1 1	0 4	—
147	Liq. arsenicalis ...S.I.(5)	—	1 3	0 4½	—
84	Liq. cocci., B.P.C., '49	—	—	3 7	0 6
32	Liq. tartrazin. co.	—	—	1 4	0 2 4
66	Magnes. carb. pond.	—	1 2	0 4½	—
132	Ol. anethi.	—	—	—	1 2
66	Ol. myristicae, B.P. '53	—	—	—	2 5
40	Ol. olivae	4 5	1 3	0 4½	—
162	Ol. ricini	—	5 2	1 7	0 2 4
32	Ol. theobromatis	—	3 8	1 0	0 3½
147	Paraffinum dur.	—	4 9	1 5	0 2½
66	Pasta resorcin. et sulphur.	—	3 1	0 11	0 1½
96	Pasta titan. dioxid.	—	—	—	—
48	Pig. tinctor., B.P.C.	—	1 7	0 5½	—
99	Pimentæ pulv.	—	—	1 11	0 3½
66	Potassii bromidum	—	2 1	0 7½	0 1
48	Procain. hydrochlor. ...S.I.(4)	—	—	—	1 0
132	Quinidina <sup>e</sup> sulphas	—	—	—	2 8
66	Sodii acetas., B.P.C., '49	—	2 1	0 7½	—
28	Sodii carbonas exsicc.	3 2	0 11	0 3½	—
21	Sodii sulphas exsicc.	2 5	0 8	2 2½	—
47	Tartrazina, B.P.C.	—	—	—	0 11½
59	Theobromin., B.P.C.	—	—	—	1 3
51	Theobromin. et sod. sal.	—	—	7 3	1 1
237	Tinct. ipecacuanhae	—	7 7	2 4	0 4
186	Tinct. senegae, B.P.C.	—	6 0	1 10	0 3
82	Ung. cinchocain. co., B.P.C., '49	—	—	3 6	0 6
63	Ung. dithranolis	—	2 0	0 7½	—
132	Ung. methyl. salicyl. co.	—	8 6	2 6	0 4
63	Ung. zinci et ol. ricini	—	2 0	0 7½	0 1
123	Ung. zinci undecen.	—	7 10	2 5	0 4

Cost	TABLETS	Retail (in container)	
d.	per	25	100
126	Calomel gr. ¼	—	—
132	Calomel gr. ¼	—	—
150	Grey powder (up to gr. ¼)	—	—
171	Thyroid gr. 2...	P.I. (13)	—
		1 1	2 11

## SURGICAL DRESSINGS

(Individually wrapped)

BANDAGES	1 in.	1½ in.	2 in.	2½ in.	3 in.	3½ in.	4 in.	6 in.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Crepe, B.P.C. (5 yd. stretched)	—	—	2 3	2 9	3 3	3 9	4 3	—

The bold letters and figures at left of dispensing price relate to the classification of poisons in THE CHEMIST AND DRUGGIST Poisons Guide.

# Equanil

**prices are down again**

---

Economies in manufacture, brought about by the wider acceptance of meprobamate as a standard method of treatment, enables us to pass these on as a

**12½%**

**PRICE REDUCTION**

*From Monday, 9th February 1959 prices for Equanil\* will be :*

	<i>Public Price</i>	<i>Retail Price</i>	<i>Nett Price per doz.</i>
	<i>£. s. d.</i>	<i>£. s. d.</i>	<i>£. s. d.</i>
400 mg. tablets			
20's	5. 6	4. 1	2. 9. 0
250's	2. 18. 11	2. 4. 2	26. 10. 0
<b>Equanil H.S.</b>			
200 mg. tablets			
20's	3. 6	2. 8	1. 11. 6
250's	1. 15. 0	1. 6. 3	15. 15. 0



\*trade mark

# VI-LAN Lanolin Cream



TR.190

*the successful treatment  
for rough or chapped skin*

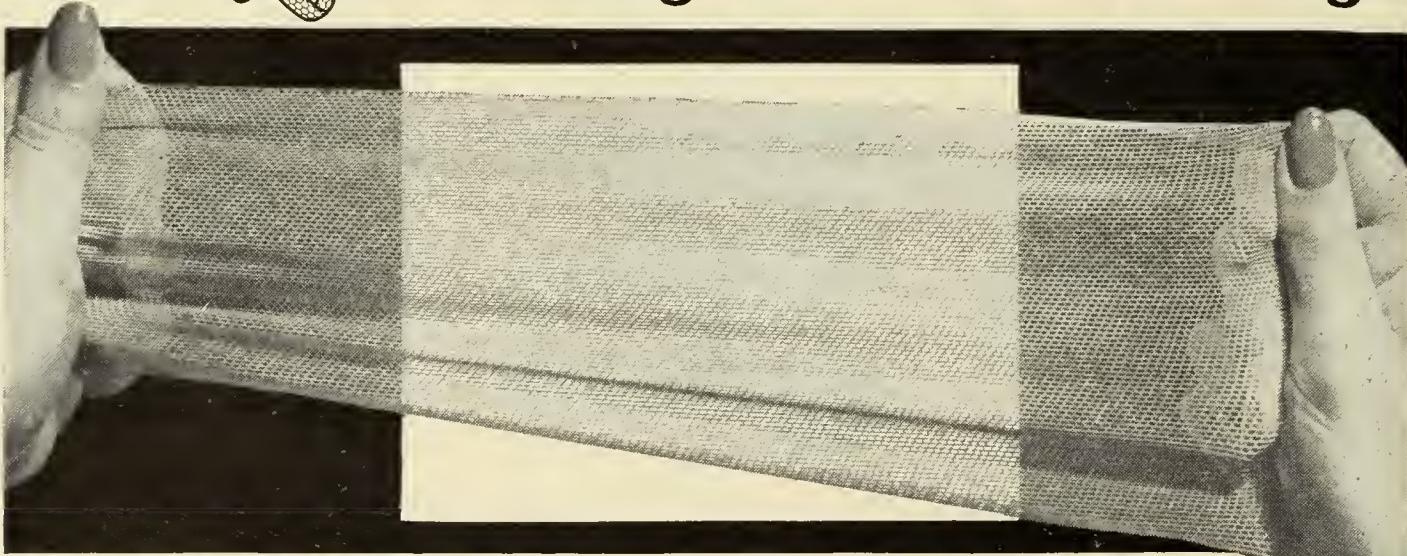
Vi-lan is lanolin cream presented to the public in a most attractive pack and in a most convenient form. Customers are pleased with its effectiveness and continually repeat their orders, whilst our chemist friends gain the benefit of the generous profit margin.

Classified advertising in the *Sunday Express*, the *People* and the *News of the World* brings Vi-lan to the notice of almost all the households in the country. A constant display on your counter will ensure profitable business. Sample and bonus terms available on application.

THORNTON & ROSS  
LIMITED  
LINTHWAITE LABORATORIES  
HUDDERSFIELD ENGLAND

★ RETAILS AT 1/6

New! *Lastonet* light-resistant stocking



... increases your profits

First in the field once again, with improvements in surgical stockings, Lastonet now introduce *light-resistant rubber* into their elastic net. Because this largely prevents the deterioration caused to rubber by exposure to light, it enhances the efficiency and lengthens the life of Lastonet Elastic New Stockings. With this added ad-

vantage, Lastonet Stockings will be even more widely prescribed on the NHS, so your profits must increase.

No stock problems with Lastonet Stockings! No risk. Every stocking is individually made to the patient's measure. Quick delivery and an excellent profit margin are assured. Send today for measurement forms and Display Material.

P.T.6

*Lastonet*  
ELASTIC NET STOCKINGS  
Nylon or cotton

LASTONET PRODUCTS LTD.  
CARN BREA, REDRUTH, CORNWALL

# HERE'S HOW STERGENE SALES SUPPORT WORKS FOR YOU!

No matter where you are in Great Britain—throughout 1959 you'll get the strongest advertising backing for Bubbly Stergene right to the point of purchase.

Heavily concentrated regional advertising on Television and in your local papers will appear for one month . . .



**IN THE SOUTHERN HALF OF ENGLAND • FEB 14th – MAR 13th**

\* **backed by** large space all year-round advertising in colour and black and white in National Press and Women's Periodicals.

\* **backed by** specially designed point of purchase display material.

**BE READY—Stock now!**

**That's sales support by Stergene**

\* **Watch out for news of big scale advertising in the Northern half of England.**

Family size 2/- plus  
2d. returnable  
on bottle.

Bubbly



STERGENE IS A PRODUCT OF DOMESTOS LIMITED, NEWCASTLE UPON TYNE

WHG/S32



**NEW AND EXCLUSIVE NYLON STOPPER**  
with colour matched top, Tight sealing,  
non-odorous, non-tainting.



**NON-DRIPT POURER**  
In white plastic finish.



**GAY AND COLOURFUL "TARTAN" FINISH**  
Choice of RED or GREEN.

Each Acme Flask is fully tested and guaranteed to keep liquids Piping Hot or Freezing Cold under all conditions.

**3 SIZES**

8 Fl Oz	16 Fl Oz	36 Fl Oz
6/6	7/3	12/3

(retail prices, including purchase tax)

**ALSO AVAILABLE NOW!**  
**The NEW 'RIPPLE'**  
**DE-LUXE**



5 sizes in 4 colours including  
a NEW 4 CUP SIZE.  
22½ fl. ozs.—4 Large Cups !

Write for full details:

**ANTIFERENCE LTD.**

(ACME VACUUM FLASK DIVISION)

BICESTER ROAD • AYLESBURY • BUCKS Tel: Aylesbury 2511  
Factory: PHOENIX WORKS • BRIDGEND • GLAMORGAN

**NOW ONE OF THE WORLD WIDE ANTIFERENCE GROUP OF COMPANIES**



*The*  
**"PUNGOR" type**  
**HIGH-FREQUENCY**  
**TITRIMETER . . .**

. . . operates in the vicinity of the 150 Mc. frequency.

It can be used for the determination of acids and bases in aqueous and non-aqueous solvents. It lends itself to precipitation tests as encountered in argentometric measurement or in sulphate and alkaloid determination, etc.

It permits the temporal variations of fluids in enclosed ampoules to be observed by watching the changes of the conductivity.

Finally, it can be used as an indicator for process inside ion exchanging columns.



**METRIMPEX**

Exporter :

**Hungarian Trading Company for Instruments**

Letters: Budapest 62, P.O.B. 202

Telegrams: INSTRUMENT BUDAPEST

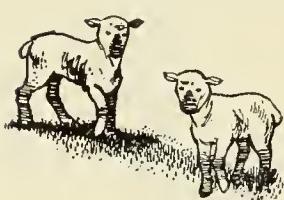
# Calcium Gluconate



Calcium Gluconate is widely accepted as the most satisfactory means of administering calcium. Prescribed medically for numerous ailments, including debility, rickets, dental caries, neurasthenia and in pregnancy.

Taken by the mouth in tablet or powder form Calcium Gluconate is well absorbed and practically tasteless. By injection it produces the minimum of reaction. For full details please write for our booklet.

. . . and in veterinary practice



*Calcium Gluconate is also used in the treatment of conditions such as milk fever, eclampsia and lambing sickness.*

*Please write for our new leaflet "Calcium Gluconate in Veterinary Practice" for full details.*

**KEMBALL, BISHOP**

*Chemicals for Industry*

KEMBALL, BISHOP AND COMPANY LIMITED  
THREE MILL LANE • BROMLEY-BY-BOW • LONDON, E.3  
Tel: ADV.1234 (7 lines). Grams: KEMBALL, BOCHURCH, LONDON



A Quality product...  
Consistent National &  
T.V. advertising...  
High profit margin...

## Dr. WERNET'S POWDER

*The best-seller in Denture Fixatives*

STAFFORD-MILLER LTD HATFIELD

HERTS

## For the busy Chemist

the new Cuticura Medicated Liquid provides a two-fold service. Just one bottle makes a brilliant and attractive display that answers the customer's enquiry "What do you recommend . . . ?" And every bottle earns the customer's thanks for a preparation that effectively soothes and relieves minor skin and scalp irritations.

Mildly medicated for the Care of the Skin, as are all the Cuticura Preparations—Soap, Ointment, Talcum Powder and Shaving Stick—now comes the new

## Cuticura Medicated Liquid

Trade Price 23/6 dozen, selling at 3/2 bottle  
Purchase Tax 30%

# Meggeson

## THE FIRST NAME IN PASTILLE THERAPY

---

For more than 160 years, chemists—and their customers—

have looked to the House of Meggeson for pharmaceutical

products of the highest standard. Today, millions of men

and women ask for them regularly in preference to other

medicated pastilles and lozenges. This 'brand consciousness'

is continually being increased by powerful national

advertising, ensuring bigger profits for you every year.



*Meggeson & Co. Ltd., London S.E.16*

# Sensational success in Midlands!

# NOW LOXENE MEDICATED HAIR CREAM

## GOES NATIONAL WITH

## THIS TREMENDOUS ADVERTISING

**What Loxene Medicated Hair Cream is—and what it can do for your customers.**

Loxene Medicated Hair Cream is an entirely new and different Hair Cream which, in addition to giving perfect all-day grooming, also ensures freedom from dandruff.

Your customers will want Loxene Medicated Hair Cream because it gives them everything the best hair cream can give them *plus freedom from dandruff*.

Make sure, *now*, that your order will meet the big and increasing demand for the one and only medicated hair cream on the market!

**ORDER FROM** our representative when he calls to show you a sample and to place his services at your disposal, or direct from:

F. W. HAMPSHIRE & CO. LTD.  
SUNNYDALE, DERBY

Urgent orders phone Derby 22202 (3 lines)

**DAILY EXPRESS**

These Big spaces

- 1  $\frac{1}{2}$  PAGE
- 1 15" x 5 COLUMNS
- 2 13" x 5 COLUMNS
- 6 11" x 3 COLUMNS

**DAILY HERALD**

These Big spaces

- 1 13" x 5 COLUMNS
- 4 11" x 3 COLUMNS

**DAILY MIRROR**

These Big spaces

- 2 WHOLE PAGES
- 4 10 $\frac{1}{2}$ " x 5 COLUMNS
- 5 10 $\frac{1}{2}$ " x 3 COLUMNS

and so make the common mistake of  
Don't ignore dandruff — ever.  
Keep the scalp clinically clean —  
preferably with a good medicated  
shampoo — then maintain hair  
health and freedom from dandruff  
with the antiseptic action of

**NEWS CHRONICLE**

These Big spaces

- 1 13" x 5 COLUMNS
- 4 11" x 3 COLUMNS

**DAILY MAIL**

These Big spaces

- 1 15 $\frac{1}{2}$ " x 5 COLUMNS
- 1 13" x 5 COLUMNS
- 5 11" x 3 COLUMNS

# NOW... EVERYTHING THE BEST HAIR CREAM CAN GIVE YOU

## PLUS freedom from DANDRUFF

30 second 'spots'  
two or three times a week  
on the Tyne Tees and  
Wales and West T.V.

Into the formula for Loxene Medicated Hair Cream made by the  
makers of the famous Loxene Medicated Shampoo, have gone all  
the ingredients contained in the finest hair creams plus the unique  
odourless medication that actually protects against the development  
and spread of dandruff and other troublesome hair and scalp  
conditions.

So, for healthy hair, handsome hair, insist on Loxene, the  
Medicated Hair Cream. Then you know that your hair is always  
smooth and smart, is always getting the all-day protection it  
needs to stay as healthy and handsome as it naturally should be.

# LOXENE

MEDICATED HAIR CREAM



Loxene Medicated  
Hair Cream comes to  
you in a special  
tub, made of airtight  
green glass to keep the  
stable medicaments  
in perfect condition for  
your regular grooming.

**YOU** VERY NEARLY PUT



"INTO ORBIT" IN JANUARY WITH

OVER **100%** INCREASE IN SALES!

*Thank you, we are delighted!*

**BIOMETICA LTD.**

1 ELSTREE WAY, BOREHAM WOOD, HERTS. ELSTREE 3520

*Knoll*® Fine Chemicals

enjoy world-wide  
reputation

**Barbonin®**

(6,7-diaethoxy-1-[3,4-diaethoxy-benzyl]-  
isodihinoline)

**Bromoisovalerylurea** (Bromvaletone B.P.C.)

**Caffeine Alkaloid and salts**

**Ephedrine, its salts and derivatives**

**Papaverine and its salts**

**Pentamethylenetetrazol** (Leptazol B.P.)

**Theophylline, its salts and derivatives**

**Theophylline Ethylene Diamine**

\*  
*Knoll*® Fine Chemicals are  
distinguished by their purity  
and meet the requirements  
of the prominent  
pharmacopœias.

Marketed by  
**Alwitt Ltd.**  
1, Broad Street Place  
**LONDON, E.C.2**





## *Sunshine and Warmth...* for people of all ages

So many people would feel all the better for the stimulating warmth and sunshine provided by Philips Health Lamps. For instance, when used on medical advice, these lamps are often remarkably successful in treating rheumatic complaints and debilitated conditions.

### Philips Ultra-violet **SUNLAMP** (Made in Holland)

Philips Sunlamp gives the blessing of "Mountain sunshine". Doctors know the value of the right type of sunlight and do not hesitate to recommend the Philips Ultra-violet Sunlamp Price: £5.17.6d. (Including goggles.)



*A doctor's certificate must be presented when either of these lamps is purchased by the public.*

### Philips Infra-red **INFRAPHIL** (Made in Holland)

Philips Infraphil was installed in the medical centres at the last two Olympic Games. It is most valuable in alleviating the pain of arthritis, rheumatism and muscle-strain. Infraphil Infra-red lamp costs only £3.3s.0d. (as illustrated). De-luxe model "A" Price: £4.4s.0d.



### **PHILIPS ELECTRICAL LTD**

ELECTRICAL APPLIANCES DIVISION

Century House • Shaftesbury Avenue • London • W.C.2

LNF5083

B*B*O*O*i*O**N*i*F**I*

go sales of

# HACKS!

The big bombardment's going great guns!

right on target in

THE DAILY HERALD  
THE DAILY EXPRESS  
THE DAILY MIRROR

reaching millions and millions of customers!

right on time—**NOW!**

SHOW HACKS STICKERS  
SHOW MORE PROFITS!

CLEAR **PROFIT!**

11d. A POUND  
3/8d. a 4 lb. JAR  
4/7d. a 5 lb. TIN

Made by White-Hanson & Co. Ltd., Southport, Lancs. Tel: 4124/6.

**HACKS** - setting the selling pace!

# Sunfresh

*Regd. Trade Mark*

## COMPETITION TO BRING YOU MORE CUSTOMERS

The 1959 Sunfresh Competition is boosting Sunfresh sales and profits all over the country. And every bottle you sell is a possible prize winner for you! If one of your customers wins 1st prize you get £100, 2nd prize £25, 3rd prize £10, or 2gns. if you supplied one of the 15 runners-up. Intensive national advertising is backing your selling efforts all the way: with heavy T.V. advertising on all networks, bus sides throughout the country and large spaces in the Daily Mail, Daily Express, Daily Mirror, News Chronicle and the Daily Sketch. Competition entry forms will be on all Sunfresh bottles longer this year—Orange, Lemon Glucose Drink and Lemon Barley Glucose Drink. So have Sunfresh on your shelves in plenty—it's a certain profit winner for you!



# Sunfresh

*Regd. Trade Mark*

## BONUS OFFER TO BRING YOU MORE PROFIT

With every case of one dozen bottles of Sunfresh Orange concentrate delivered during the period February 16th - March 14th inclusive, one bottle of Sunfresh Lemon Glucose Drink will be given FREE!

**ORDER FROM YOUR USUAL SUPPLIER NOW**

O. R. GROVES LTD., 20 JERMYN STREET, LONDON, S.W.1  
Telephone: Gerrard 9484. (7 lines.)



# A WORD OF THANKS

## HOUBIGANT

PARIS

ABBEY PARFUMERIE CO. LTD.  
7-9 Oxford Circus Avenue · London, W.1TO PROSPECTIVE STOCKISTS:

We recently announced that the famous HOUBIGANT Perfumes are returning to this country - and your response has been most generous. Orders and enquiries are being dealt with individually and our representatives will be calling personally on each selected stockist. Please note that orders booked will not be delivered until after the Budget, when our advertising campaign is also timed to start.

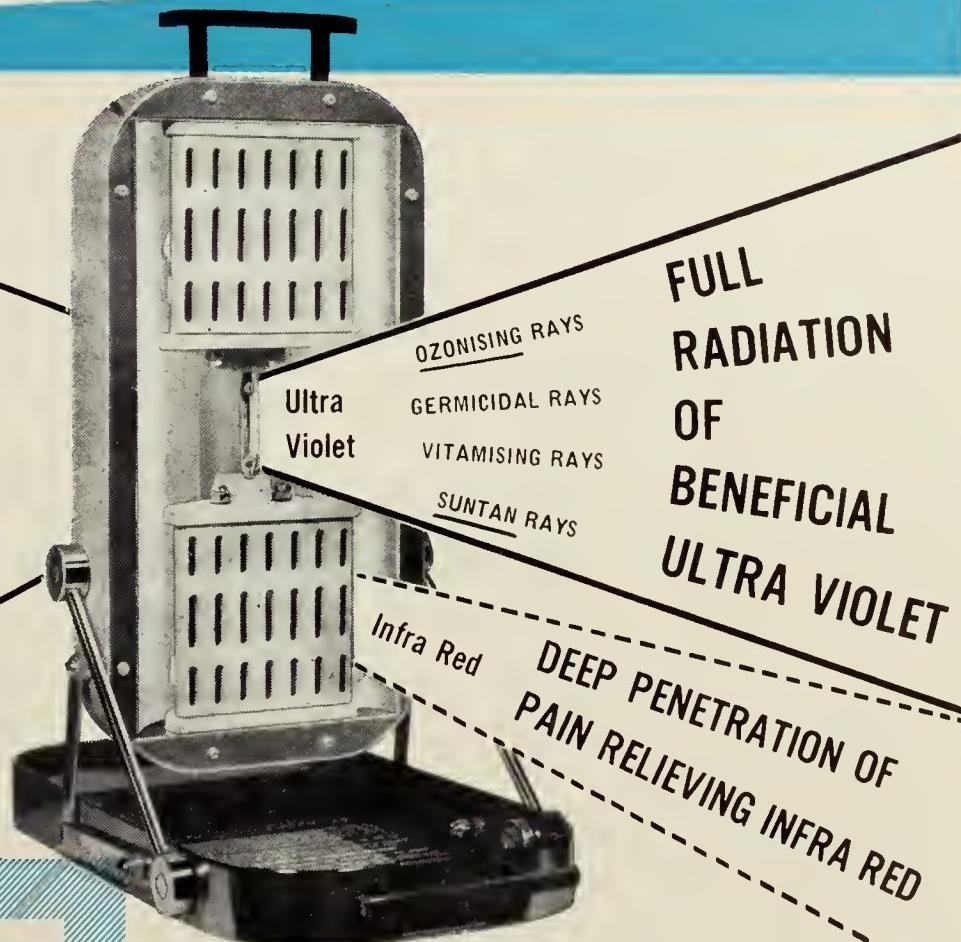
Our thanks to all who share our enthusiasm and confidence in the wonderful range of HOUBIGANT Perfumes.

**“QUELQUES FLEURS”****“CHANTILLY”****“FLATTERIE”**

**ABBEY PARFUMERIE CO. LIMITED**  
7-9 OXFORD CIRCUS AVENUE · LONDON, W.1

# THE S.A.'59' SUNLAMP PASSES

## THE 'OZONE-SUNTAN' TEST \*



RETAIL SELLING PRICE

**£15-15-0**

NO TAX

Medical Certificate required

The standard Actinea is also still available and sells at £12-12-0 No Tax

TECHNICAL LITERATURE  
DISPLAY MATERIAL and  
LEAFLETS available on request.ORDER NOW FOR THE PEAK SELLING  
PERIOD.

THE PERIHEL

**SUPER ACTINEA '59'**  
ULTRA-VIOLET INFRA-RED HEALTH LAMP

PERIHEL LIMITED 146 NEW CAVENDISH STREET, LONDON, W.I. LANGHAM 2411

(Member of the K.G. (Holdings) Ltd. Group of Companies)

# *Lightweight*

## OXYGEN THERAPY SETS

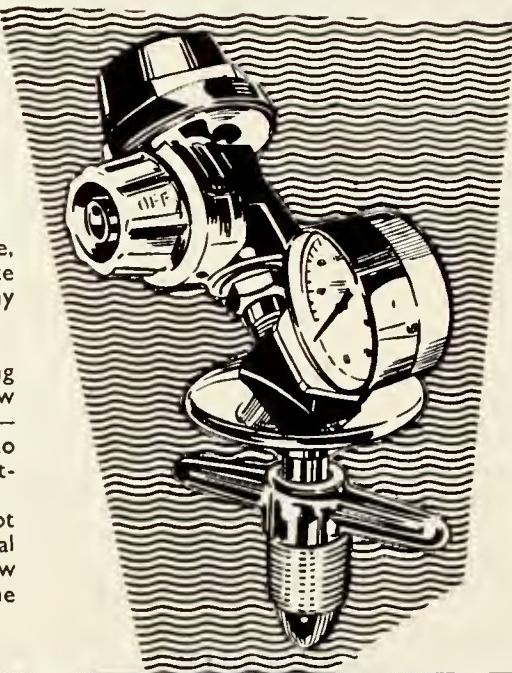
Approved by the Ministry of Health for loan by chemists against E.C. 10 prescription orders and included on the drug tariff.

Specially developed by Normalair for medical use, these light weight, compact sets, enable an accurate oxygen supply to be provided direct from any standard bull-nose-valve oxygen cylinder.

### ACCURATE, AUTOMATIC FLOW RATE.

Positive flow selectors are made by simply turning a clearly marked control knob. The selected flow rate is maintained automatically within + or - 10% with any cylinder pressure from 200 p.s.i. to 1,980 p.s.i. thus eliminating the need for adjustment as cylinder pressure falls.

Designed to ensure that the accuracy is not impaired by the handling to be expected in normal service. An integral guard protects the flow selector and pressure gauge from tightening of the wing nut. No leak testing is necessary.



### Leading Particulars

Weight  $2\frac{1}{4}$  lb.

Overall Height  $6\frac{1}{2}$  ins.

Max. Width 6 ins.

Flow Rates 2 & 4 litres/min.

Max. Inlet Pressure 1,980 p.s.i.

Ambient Temperature Range  $10^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$ .

Outlet Connection suitable for standard bayonet connector.

Designed and  
manufactured by

**NORMALAIR LTD**  
INDUSTRIAL DIVISION  
27/31 MINSHULL ST. MANCHESTER 1.  
Telephone : CENTRAL 3111

### DUNCAN PRODUCTS

made by pharmacists for pharmacists, include

# *haemamol*

an antiseptic, emollient and analgesic cream, combining the astringent and soothing properties of hamamelis and zinc oxide and the analgesic effect of chlorbutol. 'Haemamol' gives quick relief in haemorrhoids, abrasions and skin irritations.

*Sells at 2s. 6½d. per tube inc. PT.*

*In display outers of 1 dozen, from your usual wholesaler.*



**DUNCAN FLOCKHART OF EDINBURGH**

# Announcing **2 NEW** products

*For relief  
of cough*

## **Distolyt**

TRADEMARK

**antitussive tablets**

*Each sugar-coated tablet contains:*

CHLORCYCLIZINE HYDROCHLORIDE 10 mg.  
GUAIACOL GLYCERYL ETHER 100 mg.

- \* in tablet form for ready administration when coughs embarrass
- \* chlorcyclizine minimises nasal congestion and suppresses persistent cough
- \* guaiacol glycetyl ether promotes freer expectoration and reduces useless irritating cough

### PACKS

	TRADE PRICE	P. TAX	RETAIL PRICE (INC. P. TAX)
Tube of 24	3/-	11d	5/5d
Bottle of 100	9/-	2'9d	16/3d

S4 POISON

*For throat  
infections*

## **Zynocin**

TRADEMARK

**antiseptic and  
sore throat lozenges**

*Each pleasantly-flavoured lozenge contains:*

XANTHOCILLIN 1 mg.  
BENZOCAINE 5 mg.

- \* contains xanthocillin, the new potent antibiotic, effective against gram-positive and gram-negative organisms
- \* inhibits secondary yeast and fungal activity; no evidence of cross-resistance
- \* promptly relieves local soreness and pain; non-irritant and safe for all ages

### PACK

	TRADE PRICE	P. TAX	RETAIL PRICE
Tube of 12	2/6d	—	3/9d

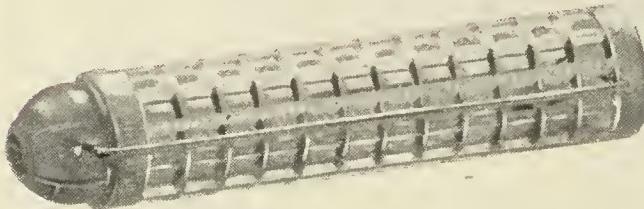
DC(BL)

**THE DISTILLERS COMPANY (*Biochemicals*) LIMITED**

BROADWAY HOUSE, THE BROADWAY, WIMBLEDON, LONDON S.W.19. TELEPHONE LIBERTY 6600

*owners of the trademarks 'Distolyt' & 'Zynocin'*

## NOVELTY CURL FOUNDATIONS "FABULO" BRAND



The world's best and cheapest UNBREAKABLE (polythene) HAIR ROLLER or CURLER in 2 sizes for professional use by Hairdressers, for use with Home Perms or simply by damping the hair.

Size 1 = 7 in Cellophane packet (very attractive) 3" long  
Size 2 = 5 " " " " 3½ "

Price 15/10 per doz. packets of either size + 30% P.T.  
Min. Retail Price 2/6 per packet of either size.

### Samples on request

Supplies obtainable through the wholesale trade or direct from:

**HAETAM LTD., 63 Corporation St. Manchester 4**  
Telephone: Blackfriars 3822

**Wholesalers who do not yet stock these renowned Curlers please contact us for trade terms.**  
Export enquiries welcome—Special prices & terms will be allowed

## Calsalettes



A safe, pure laxative that is enjoying a steadily growing reputation. Intensive and increasing advertising will make your customers ask more and more for "Calsalettes." Keep them on display!

**The  
Torbet  
Lactic  
Oat Co. Ltd.**

24 Great King Street,  
Edinburgh, 3.  
Phone: WAVerley 3801

Millions of men and women know that it's

**KAY'S**  
for coughs

\* feature Kay's display material prominently on your counter

**KAY'S**  
LINSEED COMPOUND

in syrup for the home — in pastilles for the pocket

PATTINSON'S REGISTERED BRAND  
**MAGNESIUM  
CHEMICALS**

FOR THE  
**PHARMACEUTICAL  
INDUSTRY**

FULL TECHNICAL  
INFORMATION  
ON REQUEST

LIGHT AND HEAVY MAGNESIUM  
CARBONATES B.P.

LIGHT AND HEAVY MAGNESIUM  
OXIDES B.P.

MAGNESIUM OXIDE LEVISSIMA

MAGNESIUM HYDROXIDE B.P.C.

MAGNESIUM TRISILICATE B.P.

**THE WASHINGTON CHEMICAL CO. LTD.**

WASHINGTON, CO. DURHAM, ENGLAND

Telephone: Washington 3333

*A member of the TURNER & NEWALL ORGANISATION*

*The*  
**CHEMIST AND DRUGGIST**  
**CLASSIFIED ADVERTISEMENTS**

Telephone: CENTRAL 6565

Specially spaced Advertisements, including:—Public and Legal Notices, Sale by Auction, Appointments, Contract Work, Patents, Partnerships, 18/- per  $\frac{1}{2}$  inch minimum and pro rata. Box 2/-. Clearances and Wants, Businesses for Disposal and Wanted, Premises, Agents Wanted, Agencies Wanted, Miscellaneous, 17/6 for 36 words minimum; then 4d. per word. Box 2/-. Situations Vacant, 12/- for 36 words minimum, then 4d. per word. Box 2/-. Situations Wanted, 3/- for 18 words minimum; then 2d. per word. Box 1/-. Box 1/-.

Address Box Number Replies to: THE CHEMIST AND DRUGGIST, 28 ESSEX ST., STRAND, LONDON, W.C.2

## **ORRIDGE & COMPANY**

**CHEMIST BUSINESS TRANSFER AGENTS AND VALUERS WHOLESALE AND RETAIL**  
**BRANCHES: BIRMINGHAM · SOUTHAMPTON · LIVERPOOL · SHEFFIELD · CARDIFF**

### **PREMISES TO LET**

**BARNSTAPLE, DEVON.** Offers invited for tenancy of shop on estate of 500 houses. Write to Town Clerk, Barnstaple, before February 28, 1959. C 2008

### **APPOINTMENTS**

#### **BROOKWOOD HOSPITAL, KNAPHILL, WOKING**

Assistant-in-Dispensing

Applications are invited for the above post. The successful candidate will be required to work under the supervision of the Chief Pharmacist, who is responsible for the preparation and issue of drugs and dressings for about 1,750 patients.

Salary Scale £170 p.a. at age 16 years rising to £375 at age 22 years or over rising to a maximum of £490 p.a. (plus £20 p.a. for an approved qualification).

Professional and Technical Council B of Whitley Council conditions apply to the appointment which is subject to the provision of the National Health Service Superannuation Regulations.

The successful candidate will be required to pass a medical examination.

Accommodation available for female candidate for which a charge of £2 8s. per week will be made.

Applications giving particulars of age, experience and qualifications, together with names of two referees to the Physician Superintendent, as soon as possible. C 417

#### **CITY GENERAL HOSPITAL, SHEFFIELD, 5**

Locum Pharmacist

required for indefinite period. Comfortable accommodation available for female pharmacist if required.

Salary by arrangement. Category V hospital. Apply stating particulars of age, experience, etc., to the Group Secretary, "Lyndhurst," Nethe Edge Hospital, Sheffield, 11. C 8871

#### **DREADNOUGHT SEAMEN'S HOSPITAL, GREENWICH, S.E.10**

Locum Pharmacist

There will be a vacancy for a Locum Pharmacist at the above hospital for an indefinite period from May 4, 1959. Apply to the House Governor giving details of previous experience. C 8887

### **184 STRAND, W.C.2**

Tel: TEMple Bar 9212/3 & 6340

#### **HIGHBURY HOSPITAL, BULWELL, NOTTINGHAM**

Full-time Pharmacist

Applications are invited for the above appointment. The post offers good opportunity to obtain experience in general Pharmaceutical work.

Salary £605 x £30 rising to £815.

Applications, stating age, qualifications, experience, and names of two referees, to Hospital Secretary. C 8892

#### **KING EDWARD VII HOSPITAL, WINDSOR**

(Category III Hospital)

Pharmacist

required immediately, Whitley salary. Applications with details of service and names of three referees to Secretary. C 8888

#### **METROPOLITAN HOSPITAL, KINGSLAND ROAD, LONDON, E.8**

Pharmacist

for modern department, Permanent post. Salary scale £605-£815 p.a. plus higher qualification allowance and London Weighting. Please apply with details of age, training and experience to the Hospital Secretary. C 437

#### **NOTTINGHAM No. 2 HOSPITAL MANAGEMENT COMMITTEE**

Post-graduate Students

Applications are invited for the appointment of two Post-graduate Students in Pharmacy at the CITY HOSPITAL, NOTTINGHAM (811 beds), to commence in the Summer 1959.

Excellent training and experience is available in dispensing and in the manufacture of a wide variety of sterile preparations and other products. Salary £400 per annum.

Applications, with the names of two referees should be sent to the Group Chief Pharmacist, The City Hospital, Hucknall Road, Nottingham, as soon as possible. C 8832

#### **SHREWSBURY HOSPITAL**

GROUP

Pharmacist

For Copthorne Hospital.

Pharmacist

For the Group Pharmacy at the Royal Salop Infirmary, with rota duties at other hospitals in the Group, as may be required.

Salary in accordance with Pharmaceutical Whitley Council scale.

Applications to the undersigned from whom any further particulars may be obtained.

J. P. MALLETT,  
Group Secretary.  
C 8889

#### **NOTTINGHAM No. 2 HOSPITAL MANAGEMENT COMMITTEE, NOTTINGHAM CITY HOSPITAL**

(811 beds)

Deputy Chief Pharmacist (Category V) required at the above hospital. Applications are invited for the above post, which is now vacant.

The City Hospital is a Group hospital and caters for the pharmaceutical requirements of a number of subsidiary hospitals in the area. Applicants should have a wide experience in hospital pharmacy, and be capable of controlling staff. A knowledge of surgical instruments is desirable. The successful applicant will work under the Group Chief Pharmacist and will be required to assume complete control in his absence.

Further particulars regarding the post can be obtained on application to the Group Chief Pharmacist, Whitley conditions of salary. Applications, stating age, qualifications and full particulars of previous experience, together with the names of two referees, should be sent to the Group Secretary, The Sherwood Hospital, Nottingham, as soon as possible. C 8833

#### **ST. BARTHOLOMEW'S HOSPITAL, LONDON, E.C.1**

Pharmacist

Vacancy exists for the above post. Salary according to Whitley Council scales. Accommodation might be available. Write, giving names of two referees, to the Chief Pharmacist. C 8908

#### **WHITTINGTON HOSPITAL, LONDON, N.19**

Pharmacist

required in Department of seven including clerk. Salary £635-£845. Candidates may visit the department by direct arrangement with the Medical Superintendent. (ARCHway 3070 Ext. 440.)

Applications, stating age, qualifications, experience and naming two referees to Medical Superintendent, with ten days. C 8906

#### **WINWICK AND NEWCHURCH HOSPITAL MANAGEMENT COMMITTEE**

Senior Pharmacist

Applications are invited for the above post in the Group Pharmaceutical Department at Winwick Hospital (2,305 beds).

Salary £650 x £30 (6)—£830.

Applications giving date of birth, full particulars regarding qualifications, and experience together with names and addresses of two referees should be forwarded to the Secretary (Ref. /116), Winwick Hospital, Warrington, C 8891

## **ERNEST J. GEORGE & CO.**

**329 HIGH HOLBORN, LONDON, W.C.1.**

*Professional Valuers to the Pharmaceutical Trade.—Wholesale, Retail and  
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Established 1892

The only College in S.E. England teaching exclusively for the Assistants-in-Dispensing Examination of the Society of Apothecaries. Enrolling now for six months' full-time or 2-year part-time course for Student Dispensers under 1956 Regulations, 100 per cent. Examination successes in 1958. C 404

**SITUATIONS VACANT****RETAIL HOME**

**BUTT LANE CO-OPERATIVE CHEMISTS SOCIETY, LTD.** Superintendent Chemist/Optician required. Two pharmacies. Applications are invited from qualified persons for the above position. Annual Sales £18,400, including optics (£25-£30 average). Transfers £12,700. N.U.C.O. rate of wages, no rota duties, 44-hour week, superannuation with transfer clause. Applicants should submit full details of experience, age, and qualifications, etc., along with names of two referees, to the Managing Secretary, Congleton Road, Butt Lane, Stoke-on-Trent. C 1994

**CARDIFF.** Branch manager required for long-established pharmacy, adequate staff, permanent, progressive engagement. Three-bedroomed flat provided. Please apply soonest to E. G. Howell & Sons, Ltd., 130 Queen Street, Cardiff. C 2016

**CHEMIST COUNTER ASSISTANT, E.C.1.** lady, experienced drug and cosmetic counters; modern pharmacy. Salary to £8, scope for promotion. Kendale Chemists, 51 Exmouth Market, London, E.C.1, TERminus 9494. C 8896

**CHEMIST/OPTICIAN** required as manager for branch in Sunderland. Commencing salary £24 weekly and bonus. Every encouragement for advancement. David Blackstone, Ltd., 36-38 Commercial Street, Leeds, 1. C 8825

**CONSEQUENT** upon retirement a vacancy will shortly arise as manager of attractive pharmacy in South-east London, and applications are invited from pharmacists who desire a position which is permanent and pensionable, with salary and commission in excess of £1,300 per annum. Housing accommodation not available, but assistance will be given if required. Apply stating age and particulars of experience to: The Staff Manager, Royal Arsenal Co-operative Chemists, Ltd., 71 Powis Street, Woolwich, S.E.18. C 2018

**EXCEPTIONAL OPPORTUNITY** for newly qualified pharmacist (M.P.S.). The Director of a newly opened business on a new estate in suburban Kent offers an appointment as a pharmacist and later a directorship to the right person. He is looking for a live, enthusiastic, young man or woman unhampered by tradition and whose sole object will be to work in very pleasant conditions with proportionate reward. Write full details to Box 901, Smiths, 296 High Holborn, London, W.C.1. C 8895

**METCALFE & CO. (L'POOL), LTD.**, require pharmacist/manager for branch shop at Ditton, Widnes. Salary £1,040 per annum for 44-hour week. Three-bedroom flat available. Write Managing Director, Metcalfe & Co. (L'pool), Ltd., 596 Prescot Road, Liverpool, 13. C 2012

**PHARMACIST/MANAGER** required for branch in Sunderland. Commencing salary £20 weekly and bonus. Every encouragement for advancement. David Blackstone, Ltd., 36-38 Commercial Street, Leeds, 1. C 8826

**WEST EALING.** Experienced lady assistant required for counter and display in good-class pharmacy. Knowledge of cosmetics and general sales. Apply, stating age and experience to Bruce G. Carrie, 4 Castle Hill Parade, The Avenue, West Ealing, W.3. C 1992

**WHOLESALE**

**ASSEMBLER AND STOREKEEPER** for chemists' goods (cosmetics and patent), either sex, experience essential, excellent conditions and wages. Apply: Biorex Laboratories, Ltd., 47/51 Exmouth Market, E.C.1, TERminus 9494. C 8898

**ADVERTISING EXECUTIVE**

**BRITISH SCHERING, LIMITED,** London, require a young and enthusiastic Advertising Executive, aged 27-35 years, to advise on advertising policy and to implement promotional programmes for their pharmaceutical and agricultural products in Home and Overseas markets.

Applicants should preferably have had agency experience and be conversant with the preparation of all types of promotional materials for medical specialties.

Salary will depend on experience and age and there is an excellent Pension Scheme.

Details in confidence to:—

**The Sales Director,**  
British Schering, Ltd.,  
229-231 Kensington High Street,  
London, W.8.

C 8886

**EAST MIDLANDS.** Pharmacist required to manage busy branch at March. Large modern shop with full supporting staff. Present inclusive salary £1,200. Modern house with garage available at a reasonable rent. This permanent, progressive post is superannuated. Apply: Peterborough Co-operative Chemists, Ltd., Park Road, Peterborough. C 2010

A thriving private firm of manufacturing chemists, situated in a pleasant country district in the Home Counties, producing and marketing pharmaceutical specialties, wishes to engage a young pharmacist as:—

Assistant to the Sales Manager  
He will be responsible for promoting and increasing sales to retail pharmacies.

This will be a permanent, interesting and well-rewarded position for a young man who

Wants a selling career with excellent prospects.

Has proved to his own satisfaction that his abilities lie in that direction.

Enjoys responsibility.

Is ambitious.

Likes hard work.

Expect to be rewarded for success.  
If this is what you are looking for, write to:

**The Sales Director,**  
**THE CROWN CHEMICAL CO., LTD.,**  
Stair, Lamberhurst, Kent

giving details of your past career, and qualifications. All replies will be treated in complete confidence. C 8883

**EXPERIENCED stock controller** required for comprehensive wholesale chemists. Located in a South-coast town. Only experienced applicants should apply. Contributory pension scheme in force. Apply Box C 8907.

**EXPERIENCED REPRESENTATIVE** required for wholesale warehouse, to carry fashion jewellery as sideline. Good commission. Box C 8844.

**EUCRYL, LTD.**, marketing Eucryl Tooth Powder, Galloway's Cough Syrup and other products, require a Field Sales Manager, preferably under 40 years of age. He must have had experience in selling to Chemists and be capable of supervising and organising the Company's Sales Force to bring about expansion of sales through all available outlets. The successful candidate, after a probationary period, will be required to reside near the Company's office at Southampton. Write giving full details of experience and salary required to the General Manager, Eucryl Limited, Oakley Road, Southampton. C 8893

**IMPORTERS** of fine and heavy chemicals holding interesting Continental Agencies require Manager capable of working on own initiative, also Intelligent Assistant with knowledge of Documentation. Good salary according to experience. Offices situated S.W. of London. Apply Box C 2021.

**INTERESTING SIDE LINE** offered, on commission basis only, to representatives calling on retail chemists and stores. Our own staff have been advised of this offer. Apply to Box C 1985.

**Lederle Laboratories Division****CYANAMID OF GREAT BRITAIN  
LIMITED**

require a

**PHARMACEUTICAL PRODUCTION  
SUPERVISOR**

for their new plant on the South Coast, near Fareham, Hants. PHARMACISTS (B.Pharm. or F.P.S.) are invited to apply for this new senior appointment. The duties to be undertaken will include the general supervision of the Pharmaceutical Manufacturing Group with responsibility for the manufacturing and packaging of a wide range of ethical pharmaceutical products including Tablets, Liquid Preparations, Ointments, Capsules and Parenterals.

Candidates should be about 35 years of age and have had at least eight years' varied experience in the Pharmaceutical Manufacturing and Packaging fields. A working knowledge of Method Study Techniques and familiarity with conveyor line packaging methods, would be advantageous. The commencing salary will be commensurate with individual age, experience and qualifications. Working conditions are excellent and there is an attractive Pension/Insurance Scheme. Fully detailed applications, which will be acknowledged, should be addressed, in confidence, to:—

**The Personnel Manager,**  
**CYANAMID OF GREAT BRITAIN  
LIMITED,**  
Lederle Laboratories Division,  
Fareham Road, Gosport, Hants.

C 8872

**PROCESS WORKER** accustomed to ointments, emulsions, etc., required, permanency. Excellent opportunity for promotion. Apply: Biorex Laboratories, Ltd., 47/51 Exmouth Market, E.C.1, TERminus 5216. C 8897

**SENIOR  
REPRESENTATIVE  
for the  
BIRMINGHAM AREA**

Man with a proven record of selling is offered an excellent salary, prospects, and pension scheme by manufacturers of soaps and toiletries. A car is provided.

Write fully to General Sales Manager,  
ROBERTS WINDSOR LTD., WINDSOR,  
C 8900

**REQUIRED** for training as assistant to works manager, young man age 20-30 years, with some experience in large-scale compounding and control of labour, for a factory and distillery in East Surrey. Pension scheme in operation. Applicants to give particulars of education, training and experience, and salary required, in confidence, to The Director, Box C 2014.

**REPRESENTATIVE** for well-known toilet house, to cover Birmingham and district. Experience in this trade less important than first-class selling ability. Good salary, prospects, pension scheme, car. Write fully to Managing Director, Box C 8899.

**NOW AVAILABLE**

Newly constructed premises

**LONDON, PROVINCES & BELFAST**

suitable retail or office purposes.

Central Heating, Lifts, Car Parks.

For further details apply Box 8884

**Situations Vacant—Continued**

**THOMAS KERFOOT & CO., LTD.**, require an experienced representative to call on retail chemists in the county of Yorkshire. A company car is provided and a pension scheme is in operation. Please apply, giving details of age, education, training and experience to Sales Manager, Vale of Bardsley, Ashton-under-Lyne, Lancs. C 8904

**WORKS MANAGER.** Chemist with experience in manufacture of alkaloids by extraction and synthesis required by fine chemical manufacturers near London. Salary up to £2,000 per annum. All applications will be treated in strictest confidence. Please reply to Box C 8894.

**WHOLESALE (OVERSEAS)**

**REQUIRED** by old-established British house in East Africa, a young, preferably single, pharmacist. Starting basic salary £1,400 per annum, plus commission, housing, paid leave for employee and passages for family (if married), provident fund, medical attention, etc. Full details to Box C 2020.

**AGENTS WANTED**

**AGENTS** with good connections and knowing the high-class cosmetic trade are invited to carry a new beauty preparation of quality. Territories now open: South, Midlands, North West and Scotland. Applications should be in writing only, when the strictest confidence will be observed, and addressed to Sales Director, Placenta Oil, 43 Knightsbridge, London, S.W.1. C 8905

**M.A.A.**—The Badge of a good manufacturers' agent. Manufacturers requiring reputable agents are invited to communicate with the Secretary, The Manufacturers' Agents' Association of Great Britain & Ireland (Inc.), Bream's Buildings, E.C.4. Membership available to established agents only. Particulars supplied. C 4

**SITUATIONS WANTED****WHOLESALE**

**PROCESS WORKER** or cosmetic chemist, fully experienced toiletries. Box C 2013.

**SALES REPRESENTATIVE** (28), experienced selling proprietary consumer products to chemists, seeks challenging position. Excellent sales records. Fidelity bonded. Clean driving licence. Resident London. Can be mobile. All inquiries acknowledged. Box C 2019.

**YOUNG MAN**, single, good education and address, recently demobbed, with experience of retail, seeks opening as trainee or junior in representation or wholesale. Current car licence, resident Teesside. Willing to travel. Suggestions welcomed. Box C 2017.

**WHOLESALE (OVERSEAS)**

**PHARMACIST**, experienced medical representative, requires position in the Middle East. Languages, good connections in the area. Fully mobile. Box C 2009.

**EXPORT MANAGER**

Armour Pharmaceutical Company invites applications for the above post to handle the sale of their range of pharmaceutical and surgical products into almost world-wide territories. Previous experience in similar capacity essential, salary dependent upon age, qualifications and experience. Contributory pension. Write in confidence to:

**General Manager,**  
**Armour Pharmaceutical Company,**  
**Hampden Park,**  
**Eastbourne**

C 8902

**AGENCIES WANTED**

**IRISH REPUBLIC.** Twenty years established firm of agents, holding several principal pharmaceutical agencies, seek additional agencies for top-grade advertised products only. Over 1,000 live chemist accounts open and regular 8/10 weeks contact. Service offered includes selling, distributing, packaging and manufacturing. Unapproachable sales record. Full particulars by return and marketing advice on any new product or other information willingly. Box C 1973.

**BUSINESS OPPORTUNITIES**

**EXPANSION OF PLANT.** Reputable firm making bath cubes for the trade is able to take further contracts. Box No. AC43682, Samson Clarks, 57/61 Mortimer Street, W.I. C 8667

**MANUFACTURERS** of long-established and flourishing winter product will consider distribution of a summer or all-year-round line on agency or similar basis. Principals only. Box C 2015.

**PHARMACEUTICAL COMPANY** (nationally distributed products), having capital and organisation for development and expansion, will consider (a) acquisition of proprietary preferably "ethical" with substantial turnover or possibilities for development; (b) purchase of a company or business with product-potential of considerable volume. Negotiations with principal only. Preliminary details, in confidence, to Chairman, Box C 8874.

**SILICONE** Rubber Bungs, tubing, sheet, bottle cap liners, washers and mouldings made to specification. Eesco (Rubber), Ltd., 34-36 Somerford Grove, London, N.16. C 241

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**ALL KINDS OF BOTTLES, JARS, SCREW CAPS**, cartons, packaging materials and manufacturers' stocks of all kinds bought at fair prices for spot cash. We are buyers of merchandise of **EVERY DESCRIPTION**. Clearance Stocks, Discontinued lines, Surplus and Redundant Stocks. Should you have anything for disposal, please send us samples and particulars. Reliance Trading Co., 75 Fairfax Road, Swiss Cottage, London, N.W.6. Tel.: Kilburn 0581 and 0038. C 153

**BUYER** specialises in disposing of job lots of any lines appertaining to pharmacy. Any quantity considered. Prompt cash settlement. Willing to discuss adaptation of any line which is not quite suitable in its present state. Please send samples and full details to: N. Morris, 218 Walworth Road, S.E.17. Tel. No.: ROD. 7261. C 395

**WE WILL PURCHASE** for cash a complete stock, a redundant line, including finished or partly finished goods, packing raw materials, etc. No quantity too large. Our representative will call anywhere. Write or telephone:— Lawrence Edwards & Co., Ltd., 6/7 Wellington Close, Ledbury Road, London, W.11. Tel.: Bayswater 4020 and 7692. C 140

**WANTED**

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**SPEARS**  
**(Dept. D.), 14 Watling Street, Shudehill, Manchester.**  
Phone: Blackfriars 1916.  
Bankers: Midland Bank, Ltd.

C 438

**TENDERS****NATIONAL HEALTH SERVICE  
SUPPLY OF MEDICINES, DRUGS AND  
SURGICAL DRESSINGS**

The Ministry of Health, on behalf of the Welsh Region, invite tenders for the supply of Medicines, Drugs and Surgical Dressings, as detailed below, to **HOSPITALS IN WALES UNDER THE NATIONAL HEALTH SERVICE** for one year from July 1, 1959.

Categories of Stores:—Anæsthetics, Antiseptic Fluids, Dextrose, Glycerin, Malt Extract, Medicinal Tablets, Medicines and Drugs, Paraffin B.P., Serologicals, Spirit Methylated, Vitamin Preparations and Surgical Dressings.

**DUE DATE FOR RETURN OF TENDERS:**—10 a.m. March 10, 1959. Tender Forms obtainable on written application to the Ministry of Health, Savile Row, London, W.1, quoting reference CS3/RC1/6C (Drugs) and/or CS36/RC1/2C (Dressings), stating clearly the category or categories of stores for which forms are required. No undertaking can be given that the lowest (or any) tenders will be accepted.

C 8890

**BUCKS COUNTY COUNCIL****COUNTY HEALTH COMMITTEE**

Tenders are invited for the supply of Maternity Outfits for the year commencing April 1, 1959. Full particulars and forms of tender may be obtained from the County Medical Officer, County Offices, Aylesbury. Completed tenders must reach the undersigned not later than February 28, 1959.

R. E. MILLARD,  
Clerk of the County Council,  
County Hall,  
Aylesbury.

C 8901

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A policy of expansion has resulted in the recent promotion of several of our Medical Representatives, and vacancies now exist in various parts of the United Kingdom.

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Candidates should preferably possess a pharmaceutical or equivalent qualification but applicants with a suitable technical background will be considered. The upper age limit is 40 years.

This is an opportunity to join a stable team of representatives and to become a member of a Company which markets products deriving from its own original research.

*All enquiries will be regarded as confidential. Application form upon request to :—*

THE MANAGEMENT,  
SANDOZ PRODUCTS LIMITED,  
SANDOZ HOUSE, 23 GREAT CASTLE STREET,  
LONDON, W.1.

C 8838

### THE CROOKES LABORATORIES LTD.

require a representative to cover Northern Ireland. A pharmaceutical qualification or adequate technical background is essential. The appointment is superannuated and well remunerated with progressive salary, adequate expense allowance and commission directly associated with territorial results. Only candidates with keen desire to progress should apply in writing with full details regarding age and past experience to the Sales Director, The Crookes Laboratories Limited, Gorst Road, Park Royal, N.W.10.

C 8882

### PHARMACEUTICAL PRODUCTION MANAGER

An internationally known company requires a Pharmacist (British qualification) as Production Manager to take charge of a new manufacturing unit in South Africa. After appropriate training and experience, the successful applicant will be considered for the post of Managing Director.

Candidates must have had at least five years' industrial experience in the manufacture of pharmaceutical products and a minimum of three years' administrative supervisory experience at all levels, and must be prepared to reside in South Africa on a permanent basis.

Salary in accordance with experience but not less than £2,000 per annum.

Application in the first instance should be sent to Box No. 2299, c/o Charles Barker & Sons, Ltd., Gateway House, London, E.C.4.

C 8903

### BOEHRINGER DIVISION OF PFIZER LTD. MEDICAL REPRESENTATIVES

As a result of rapid growth the newly formed BOEHRINGER (Ingelheim) PRODUCTS DIVISION of Pfizer Ltd. is expanding its force of medical representatives and applications are invited from men who should have the following requisites:—

A pharmaceutical qualification or extensive pharmaceutical background; aged between 25 and 35 years; a pleasant personality; a high integrity; ability to sell; good health. Those men who measure up to these standards can expect to be interviewed for appointments which are progressive and interesting, where industry and intelligent application of knowledge can lead to high reward.

Applications, giving full details of age, education and career to date and expressing preference for territory should be sent, quoting MNG 6734, to the:—

Personnel Officer,  
**P F I Z E R L T D**  
137/139 Sandgate Road, Folkestone, Kent

C 8729

**STOCKTAKING**

**STOCKTAKER**, with some retail or wholesale experience but not necessarily in stocktaking itself, required by well-known firm of professional valuers. The position will offer good future prospects in return for efficient service. Please write in detail with brief details of career to date and stating present salary. All replies will be treated in the strictest confidence. Box C 8909.

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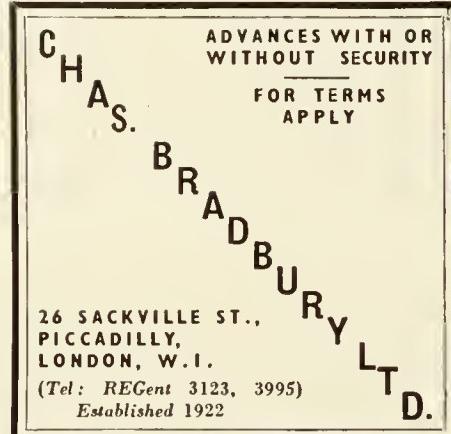
8 CLIFFORD STREET  
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C 409

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Complete with SIX Adjustable Shelves.  
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Manufactured by  
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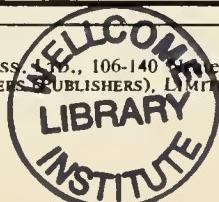
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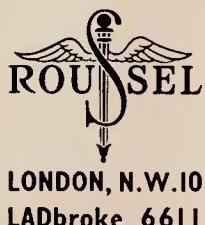
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